

# AMERICAN JOURNAL OF PHILOLOGY

Founded by B. L. GILDERSLEEVE

Edited by  
TENNEY FRANK

With the coöperation of

HAROLD CHERNISS (assistant editor), KEMP MALONE  
BENJAMIN DEAN MERITT, DAVID MOORE ROBINSON

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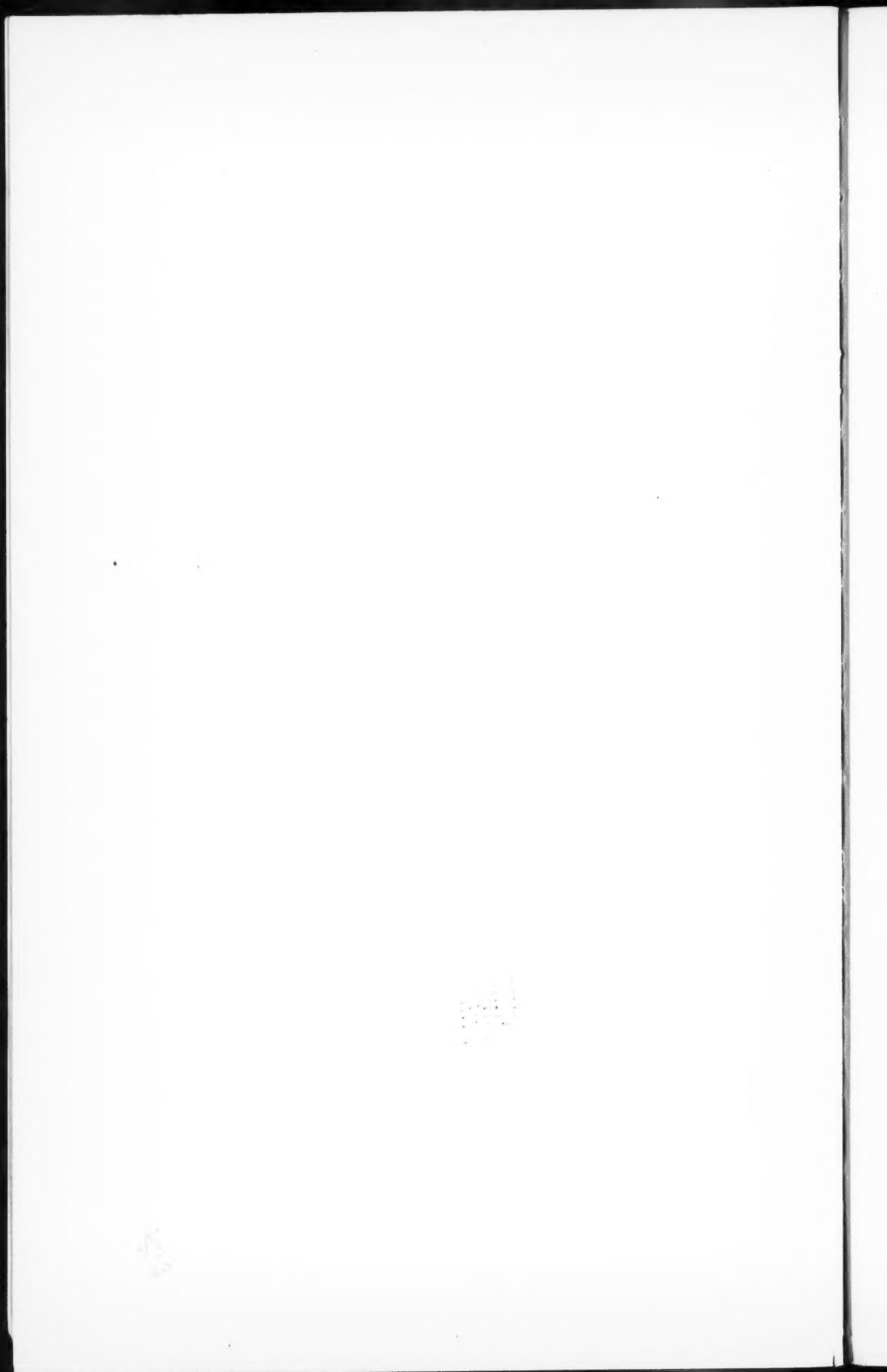
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# AMERICAN JOURNAL OF PHILOLOGY

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## NEW LIGHT ON THE CLASSICAL SCHOLARSHIP OF THOMAS GRAY.

Thomas Gray, the English poet, was perhaps the most learned man of his age and was extraordinarily well-read in Greek and Latin literature. This paper presents further evidence of the poet's classical erudition.

At Eton (*ca.* 1727) and at Cambridge University (1735-1738), Gray read extensively in the Classics. His first English verse preserved is a translation of one hundred and ten verses from the sixth book of the *Thebaid* of Statius. In 1736, Gray first appeared in print with Latin *Hymeneals*, hexameters based partly on Ovid. His subsequent Latin verses, extensive and varied, were written not only in dactylic hexameters but in elegiacs and in Alcaic and Sapphic stanzas.

As an example of his Greek verse I submit the following elegiacs with my English version. These lines, written in May 1742, were intended as a dedicatory inscription for a Wood in a Park and run as follows:

Ἀζόμενος πολύθηρον ἐκηβόλου ἄλσος Ἀνάσσας,  
Τᾶς δεινὰς τεμένην λείπε, κυναγέ, θεᾶς.  
Μοῦνοι ἄρ' ἐνθα κυνῶν ζαθέων κλαγγεῦσιν ὑλαγμοί,  
Ἄνταχεῖς Νυμφᾶν ἀγροτερᾶν κελάδῳ.

Holding in awe this grove, with its beasts of the far-shooting  
Mistress,

Leave, O Hunter, I pray, leave the dread goddess' demesne;  
Only here resounds the baying of hounds of th' immortals,  
Answ'ring the Nymphs' shrill call, echoing throughout the wild.

After 1742 Gray ceased to write verse and devoted himself for some years to the study of Greek literature. He entertained

many ambitious plans for the editing of Greek authors and collected material and wrote notes on many writers. He had in mind a critical text of Strabo, an edition of Plato, and a text of the Greek Anthology with translation of each epigram into Latin elegiacs. These plans were never carried out, although Gray gave much labor to preliminary studies.

In view of what has been said it is not surprising that Gray's poetry in English should be saturated with classical allusions and feeling. But it seems strange that these references should have been too recondite for educated readers of the time. And yet we read in the poet's own handwriting, prefaced to the first edition<sup>1</sup> of his so-called *Pindaric Odes*,<sup>2</sup> his plaintive remarks with respect to the unintelligibility of his work. "These Odes were published August 8, 1757. The author was at first advised (even by his Friends) to subjoin some few explanatory notes, but had too much respect for the understanding of his Readers to take that liberty. The words of Pindar [*Ol. II*] prefixed to them, ΦΩΝΑΝΤΑ ΣΥΝΕΤΟΙΣΙ [Vocal to the Intelligent], were prophetic of their fate: Very few understood them; the multitude of all ranks call'd them unintelligible." And so the poet sadly and reluctantly annotated his own verses by indicating the source and meaning of his allusions. These *Odes* were highly praised, although (says Mr. Gosse)<sup>3</sup> the *Critical Review*, in raptures, mistook the Aeolian Lyre for the Harp of Aeolus!

In this connection we may speak briefly of that poem of Gray which has made his name immortal, the *Elegy in a Country Churchyard*. The fame of this poem spread to all countries and it has been translated into many tongues. Byron and Shakespeare alone have been more admired and imitated abroad. Of the verse of the *Elegy* Mr. Gosse says: "The heroic quatrain [used was] an attempt to render in English the solemn alternation of passion and reserve, the interchange of imploring and desponding tones, that is found in the Latin elegiac. Gray gave his poem, when he first published it, an outward resemblance to the text of Tibullus by printing it without any stanzaic

<sup>1</sup> This edition is to be found in the collection of the Morgan Library (New York). *Odes by Mr. Gray, with Autograph Quotations. First Edition. First Book from the Strawberry Hill Press, MDCCLVII.*

<sup>2</sup> Congreve, in 1705, had anticipated Gray in this form of poetry.

<sup>3</sup> E. Gosse, ed. of the Works of Thomas Gray.



pauses." Direct classical sources in the *Elegy* are obvious in lines 21-24 (see Lucretius, III, 894-6; Horace, *Epodes*, II, 39; Vergil, *Georg.*, II, 523), and in line 119 (Horace, *Odes*, IV, 3).

In the Morgan Library in New York there may be seen the beautifully written holograph copy of the Will of Thomas Gray. In the document, dated July 2, 1770, we find this paragraph: "I give to the Revd. William Mason, Precentor of York, all my books, manuscripts, coins, musick printed or written, and papers of all kinds to preserve or destroy at his own discretion."

The library <sup>4</sup> of the poet contained a remarkably rich collection of classical works. The acquisition of these volumes evidently gave their owner great pleasure as is shown by Gray's own Catalogue of his classical books. It would appear that he began this Catalogue about 1735 and ceased to enter new acquisitions about 1742. For a period, the price paid for each volume was also carefully entered. In the pages of the Note-book devoted to the Classical Library there are two lists of books arranged: (1) In Classes, and (2) Alphabetically. Under the first caption (*Libri Classici*) we read:

"Livy, Thuc. Callim. Tac. Cat. Tibul. Propert. Claudian, Sallust, Phaedrus, Lucan, Cornelius Nepos, Statius, Petron. Ovid, Q. Curtius, Florus, Martial, Sueton. Valer. Max, Seneca, Lucian, Cicero. [all above 8<sup>vo</sup>. cum Notis Variorum, 1648-1707]. 12<sup>mo</sup>. *Elzevirs* of Sallust, Ter. Pliny Epist. Seneca, 1634-1652. Caesar, Plautus, Aristotle, Aesch. Apoll. Rhod., Aratus, Antholog. Testamentum Graecum Novum. Quintil. Lucretius, Justin's Historia, Homer- Eur., Horace, Longin. Virg. Sophocles (2 vols. cur. Johnson, Oxford. 1705) Juvenal, Persius, Cicero, Ovid, Macrobius, Dionysii Periegesis, Xenophon, Anacreon, Statius, Prudentius, Catull. Claudian, Ter. Plaut. Aristoph. Cebes, Isoc.

<sup>4</sup>It would be of interest to know the fate of the poet's library. Professor W. Powell Jones in the London Times *Literary Supplement* (June 1, 1933) gives some information: "Most of his books were kept together until November 27, 1845, when they were dispersed in a general sale by the Messrs. Evans. The best items were bought by Mr. Penn, of Stoke Poges, and sold again at Sotheby's, August 28, 1851. The descriptions in the catalogue of the 1851 sale represent our chief source of knowledge of Gray's library. After 1851 the items turn up only sporadically, the largest number being in the Sotheby sale of August 4, 1854. I have seen several of Gray's annotated books in public libraries (notably British Museum, Bodleian, and Harvard) but the greater number still lie dispersed in private collections."

(cur. Wolf. 1621) Apuleius, Theoc. Ovid, Xen. Cyrop. Demosth. Aesch. Herodian, Zosimus, Aelian, Caes. Tac. Cic. Aul. Gel. Hesiod.

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Lexica—Potter's *Antiq. of Greece*; *Etymol. Magnum*.  
 Busbey, Gk. Grammar.  
 Index to Homer; Pope's *Iliad*, Dryden's *Virgil*.  
 Budaeus.  
 Boethius—Stobaeus."

In the second list of books as arranged alphabetically the total number of volumes is 887; here the names of many authors not specifically mentioned in the first list occur, e. g., Ammianus Marcellinus, Apollodorus, Athenaeus, Lysias, *Poetae Graeci*, Pindar, Plato, Plutarch, Plotinus, Philo Jud. and Petronius.

To the study of his Greek authors Gray, who has been aptly called "the perpetual student," devoted many years of his life. The visible proof of this industry is to be seen in his many note-books. Some of these have been made known:<sup>5</sup> e. g., (1) Notes on Aristophanes (all eleven plays); (2) Brief Notices of Socrates and his Friends; and (3) Notes on Plato. There are, however, a number of the poet's classical note-books devoted to Greek authors that have never, so far as I am aware, been published.<sup>6</sup> In these notes Gray gives evidence of the careful reading of Plutarch, Sophocles, Fabricius' *Bibliotheca Graeca*, Diogenes Laertius, Athenaeus, Lysias, Isocrates, Andocides, Antiphon, Xenophon's *Cyropaedia* and other Works, and Thucydides. The writing is in ink in a fine, clear hand. Six pages are devoted to Plutarch, one and a half to Sophocles, one and a quarter to Fabricius, five and a half (dated Nov. 20, 1746) to Diogenes Laertius, seven pages (dated Jan. 4, 1747) to Athenaeus, nineteen pages to Lysias (dated March 20, 1747), Isocrates (dated Dec. 26, 1747), Andocides, and Antiphon. The notes to Xenophon are dated March 1, 1748.

Gray's Notes on Sophocles (*Ajax* and *Electra* only), based on the edition of Stephanus (1603), I reproduce, *verbatim et literatim*, in their entirety:

<sup>5</sup> See vol. 4 of Gray's Works, edited by E. Gosse.

<sup>6</sup> These note-books are in the Morgan Library, New York. To the librarian of this Collection I am indebted for the opportunity to study these pamphlets. Some preliminary notice concerning them has pre-

Sophocles. cum annot: Camerarii & H: Stephani. 4<sup>to</sup> 1603  
ap: P: Stephanum

*Ajax*

We see in the Argument that this Drama was so called simply in the ancient *Διδασκαλίας*; that Dicaearchus named it *Αἶαντος Θάνατος*, and that it got its present Title, *Αἶας Μαστιγοφόρος*, by way of Distinguishing it from another Drama, the *Αἶας Λοκρός*.

155. Τῶν γὰρ μεγάλων ψυχῶν ἱεῖς, οὐκ ἂν ἁμάρτοι

*Sophocles. P: Stephani. 4<sup>to</sup> 1603.*

*His Life. by an Anonymous Author*

Date of his Birth false. he was two Years older—Words comparing his Age to that of Aeschylus and Euripides to be transposed. he was 24 (and indeed 28 years) younger than the first, and 17 older than the latter—first formed a *Θίασος* or Collegium of learned Men, sacred to the Muses—his *Στρατηγία* in the Samian War, when he was (not 65) but 58 years old—<sup>7</sup>

*Ajax*

175. Diana seems mentioned here, as the Cause of Madness. Mars and Enyalios are distinct Divinities here,<sup>8</sup> as in Aristophanes—Irene v: 456-58. the Sch: justly censure this cold Allusion of Ajax to his own Name. they call it *ἀρχαίोटρόπον τι* (there is an Example of it in Aeschylus Sept: contra Thebas about Polynices) and Sophocles had used it not here alone. in his Life, there is another, such, on the name of Ulysses, cited—830.<sup>9</sup> This is a rare and remarkable Instance of all the Characters, even the chorus itself, leaving the Stage. they hurry off different Ways with much Nature and Propriety in Search of Ajax. he reenters alone (for the Scene does not change according to D'Aubignac and Brumoy, tho' the Scholia assure it does, to a desert Place, wch Ajax has chose to die in) there is an Impropriety either way; for in the former Case it is odd, that he should neglect the Opportunity he has had, while alone, of destroying himself, and come back before his Tent to do it. in the latter the Unity of Place is broke thro', wch however I take to be the case here, for the principal Reason, why the ancients observed that Unity seems to be, because the Chorus never left the Stage, and it would be absurd, for them to remain in the same Spot of Ground, and the Scene itself to remove to

viously been given in a brief paper, apparently read before the Modern Language Association, by W. Powell Jones.

<sup>7</sup> Gray's dates are correct.

<sup>8</sup> So also *Schol.* See Jebb, ed. of *Ajax*, pp. 38 and 222.

<sup>9</sup> i. e. 814 (ed. of Jebb).

another Place. but here Sophocles has contrived to send them off, while the Scene opens, and discovers the Place Ajax had chose for his End. 1080. Ὅπου δ' ὑβρίζειν, etc.: this is one of those Strokes on the Athenian Constitution so frequent in their Tragic, as well as Comic Writers 1153.<sup>10</sup> Μὴ νῦν ἀτίμα θεοὺς—the Manes of the Dead were regarded, as a Sort of Divinities, not to be violated with Impunity. even the Body itself was sacred, wherefore Teucer places (as a Suppliant) the young Eurysaces near his Father's Body (v: 1190)<sup>11</sup> and makes him take hold of it, as the Statue or Altar of some Deity—1240<sup>12</sup> Temple at the extremity of the Promontory Sunium, sacred to Minerva—1377.<sup>13</sup> Κρατεῖς τοι τῶν φίλων νικώμενος—The Time of the Drama is the same with that of its Action, a few Hours only—

### *Electra*

Sch: The sacred Fire preserved, καὶ μέχρι τοῦ νῦν δεικνύμενον (wch shews the Antiquity of this Scholiast) in the Temple of Apollo ἐν Ἀγορᾷ Λυκείῳ, in Argos; bc believed to be the first, that was brought among Mankind. the Scene is at Mycenae before the Palace of the Atridae; on the left is seen in Prospect (for it was not 2 miles distant) the famous Temple of Juno, and at a greater Distance (supposed about 5 Miles farther) the City of Argos, in wch the Temples of Apollo (and of Nemean Jove) with the Grove of Io, might be distinguished. It is further remark'd here by the Sch. that Wolves were sacrificed to the Argive Apollo, and that they were figured on their Coins, as the Owl on that of Athens.

### *Difficulties*

Ajax. Εἰ τὰ μὲν φθίνει, φίλοι, pointing perhaps to his Sword and Shield, or meaning his own Limbs and Strength. Τοῖς δ' ὁμοῦ πέλας, that is to the slaughter'd Carcases of Animals, that are scatter'd round him, as he lyes. [651]. βαφῇ σίδηρος ὤς, Iron heated, and dip'd in oil, grows soft, says the Scholiast. Another makes the Simile belong to the Line preceding. [695]. Why is Pan called ἀλίπλαγκτος; the Sch. says because he was worship'd peculiarly on Promontories. [1086]. Οὐκ ἀντιτίσειν αὐθις ἂν λυπώμεθα. 1156<sup>14</sup> ψηφοποιός alludes (and I imagine v. 1305,<sup>15</sup> wch is a Reflection cast at Menelaus too) to some obscure story—1288.<sup>16</sup> Οἷδ' ἐπὶ σμικρῶν πόνων—I read—Οἷδ' ἐπὶ σμικρὸν (scil. χρόνον) πόνων etc. Electra 200<sup>17</sup> Δεινὰν δεινῶς so in the Text and Scholia too—perhaps, Μομφάν—229.<sup>18</sup> Τίγί γὰρ—πρόσφορον ἀκοῦσαι μ' ἔπος.

<sup>10</sup> i. e. 1129.

<sup>11</sup> 1171 ff.

<sup>12</sup> 1220.

<sup>13</sup> 1353.

<sup>14</sup> 1135.

<sup>15</sup> 1284.

<sup>16</sup> 1268.

<sup>17</sup> 198.

<sup>18</sup> 226.

The Notes on Lysias are headed: "Lysias, Taylori, 1739. Lond: 4<sup>to</sup>. Pro Euphileto, de caede Eratosthenis moechi." There follow brief notes on the Greek house, "appartments," doors, costume of married women, and the legal penalties for adultery. On the *Oratio Funebri in Corinthiorum Socios* are the notes: "A noble and picturesque Description of the State of Greece immediately before the Battle of Salamis." "Herodotus' Account of the Battle of Plataea is here confirmed who gives the whole Honour of the Action to the Lacedaemonians, Athenians, and Tegeatae." "30 Minae (96 £ 17-6) a handsome Fortune for a young Woman of Condition at Athens."<sup>19</sup>

On the *Olympic Oration* Gray comments thus: "The Spartans, he says, were justly (for their innate Bravery and Skill in War) at the Head of Grecian affairs w<sup>ch</sup> is extraordinary in the Mouth of an Athenian and when the State was actually engaged in a War against them."

On the *In Eratosthenem* there are notes on Cyzicene and Daric *Stateres*; on the Slaves of Lysias, on Ἐλικτῆρες, and the Character of Theramenes; also these queries—433. κληροῦσθαι τῶν ἐννέα ἀρχόντων—might then any Citizen draw lots for this Office, who was of an able Body, and fit to undergo its Functions? 472. κατὰ πρυτανεῖον—Did the Magistrates give an Account of their Actions 10 times every year? 478. What laws were inscribed on the κύρβεις and what on the Στῆλαι?

On Andocides *de Mysteriis* Gray was perplexed by several matters, as his queries prove: 6. What was this torture on the Wheel, τροχός or Στρεβλή? 7. Who was this Φρύνιχος ὁ ὀρχησάμενος? The Comic Writer? 12. Was this Melitus the same who soon after accused Socrates?

Of Antiphon's *Novercae Accusatio* Gray's opinion was not flattering—"This is an artless Thing enough, and full of Repetitions even without varying the Terms." Of the *Orat. de Caede Choreutae* he says: "This Oration seems to be imperfect. There are several Passages in it transcribed from the former and many needless Repetitions, yet it seems at least antique, tho' perhaps not of Antipho."<sup>20</sup>

On the Discourses of Isocrates we read certain personal judg-

<sup>19</sup> Lysias, XVI, 10.

<sup>20</sup> Gray's scepticism here is unwarranted.



ments that are of interest: "The Orat. *περὶ Ἀντιδόσεως* the only one spoke by himself in Person."<sup>21</sup> In *Sophistas*—"This discourse is imperfect at the end. I should imagine it was wrote before the Panegyric and the Encom. of Busiris when the reputation of Isoc. was yet rising but before he had attained that confessed Superiority he afterwards did."<sup>22</sup>

With Gray's comments on the *Panathenaicus* all would doubtless agree. Of the Preface he says: "This prolix Vindication of himself ag. the attacks of a few trifling and contemptible men (and that in the Exordium of a Grand Oration in Praise of his Country) seems, tho full of good sense, to be improper, and not well judged in a Person of his great Age and Character." 281. "All this, that passed with Relation to this Work between his Friends and him, seems to me very prolix, uninteresting, and artless, besides the obscurity of it."

Of the authenticity of the first two Letters of Isocrates Gray is sceptical: "The 1st Ep. I take only for a mean Imitation of Isoc. Diction, wrote perhaps as an Exercise by somebody." The 2nd to Philip: "I doubt this Letter too (tho' it has far more good sense, than the former in it)."

Gray used Casaubon's edition of Athenaeus; author and editor alike are accused of ignorance of sources, especially of Thucydides. On 165 there is this note of complaint: "The verses of Cratinus utterly unintelligible. Casaub.: is quite silent."

The poet-scholar's independence is further shown in interesting fashion by his Note in criticism of Hutchinson (as Editor) on *Cyrop.* 232, *Διοσκούρους παιᾶνα*, etc. "H. in vain will have it, that Xenophon in this Work has exactly observed the Persian Manners; in this Place he would prove that they worship'd the Dioscuri, w<sup>ch</sup>, if any, were gods proper to the Greeks. All he grounds himself on is an Emendation of his own on Hesychius, who says—*Δεῦας, τοὺς ἀκάκους θεοὺς οἱ Μάγοι*, he reads, *τοὺς ἀνάκους*, etc.: very arbitrarily; it is well known that the Persians had two opposite Principles, one of Good, the other of Evil, and prob. the inferior Deities were divided between them . . . it is clear to me that the Persian Education, the Conversation of

<sup>21</sup> This statement is, of course, erroneous; this speech was composed as a personal defense, but for a fictitious trial and occasion.

<sup>22</sup> Isocrates himself tells us this in *Antidosis*, 193.

Cyrus, his military Precepts and Discipline, etc. are plain Copies of the Spartans, the favourite People of Xenophon, and that is the Fault of this fine work, that it has too much of the Greek Air."

We conclude here our survey of Gray's classical studies. The extraordinary range of his Greek reading and interests is further revealed by this new material in his own note-books. Although not a classical scholar in the exact and professional sense of the term, the poet was an independent student, much more than the mere dilettante. The reading of the ancient literature was with him not a mere avocation; the enjoyment and understanding of the Classics formed a major preoccupation of his life.

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## MODAL USAGES IN CHARITON.

In editing an author such as Chariton, whose book with the exception of small fragments is preserved in a single manuscript, decision on the correctness of readings must perforce rest almost entirely on two considerations, the prevailing literary idiom of the period at which he wrote, and, what is still more decisive, the internal, statistically determined evidence of his own practices. "Ὁμηρον ἐξ Ὁμήρου σαφηνίζειν must be the motto. The system of Cobet and his contemporaries, who carefully ejected from post-classical authors nearly all deviations from fifth-century Attic idiom, is long outmoded. The business of an editor now is to justify an author, if he can, not to correct him. In the absence of comprehensive treatises on the grammar of the Roman period, the task is difficult. Much, of course, may be gained from the work on the language of the papyri and from that on the N. T. idiom, but analysis of the language of individual authors must be continued before any literary norm can be set for this period comparable in completeness to that set for the fifth and fourth centuries. Such work has made considerable progress since that monumental study, Schmid's *Atticismus*, gave the impetus forty years ago; but much remains still to do.

The present small contribution is limited to the study of four moods of the verb in Chariton and is written from the point of view of an editor interested chiefly in restoring to Chariton, within the limits of the manuscript tradition, that degree of syntactical "freedom" to which he would appear from his own work to be entitled.<sup>1</sup>

### I.

#### SUBJUNCTIVE.

Subjunctive forms appear approximately three hundred times. Their uses may be classified as follows:

##### A. Independent.

1. Hortatory type. This is found forty-eight times. There are twenty forms in the present tense and twenty-eight in the

<sup>1</sup> References in the sections which follow are to page and line of Hercher's edition (*Erotici Scriptores Graeci*, Vol. II, 1859).



aorist. Since there is no consistent distinction in meaning between the two tenses, Hercher's change from the present to the aorist in 18, 24 seems unnecessary. The present and aorist are combined also in 70, 1 and 2.

2. Prohibitory aorist type with *μή* and its compounds. This appears thirty-nine times in the second person. In one case<sup>2</sup> only does F offer by easy error the similar future indicative form. This use of the subjunctive in prohibitions is far more frequent than that of *μή* with the present imperative.<sup>3</sup>

The third person prohibitory aorist subjunctive appears three times, twice in F and once in the Oxyrhynchus fragment, where I believe the reading is superior to the second person of F.<sup>4</sup>

3. Deliberative interrogative type. Owing to the occasional similarity in form and function between the active first person singular of the future indicative and of the first aorist subjunctive, the exact number of occurrences of this construction cannot be given. There are however twelve unambiguous instances of it in the direct interrogative form with the verb in the first person aorist subjunctive. There is no case of the present subjunctive in this use.<sup>5</sup> The deliberative future indicative appears plainly, combined with what may be either another future, or an aorist subjunctive, in 37, 11;<sup>6</sup> and another similarly possible combination of the two moods appears in 60, 24 and 29. It would seem therefore that Reiske's change in 49, 19 f.<sup>7</sup> is perhaps unnecessary.

<sup>2</sup> 12, 12: *θάψετε* F, *θάψητε* Beck. This substitution of the future has possible support, but is better regarded as a misspelling. See Moulton, *Prolegomena*, p. 177.

<sup>3</sup> There are ten cases of the latter construction. For these and one apparent instance of *μή* and the second person of the aorist imperative, see below, p. 21 f.

<sup>4</sup> 32, 15: 'ταύτην' φησὶ 'κομισάτω τις τῇ ξένη. μή εἴπη (Ox., εἴπητε F) δέ κτλ.'

<sup>5</sup> So in the N. T. there is but one doubtful case of the present in this use. Cf. Blass-Debrunner, *Neutestamentliche Grammatik*<sup>5</sup> (1921), § 366, 1. This fact leads me to doubt the accuracy of Hercher's emendation of 44, 30: 'τί σοι δέδοκται; τί ποιοῦμεν (sic F, ποιῶμεν Her.); καιρὸς γὰρ οὐκ ἔστι τοῦ μέλλειν.' The present indicative is here used to indicate that the decision must be made on the spot. Cf. Plato *Gorg.* 480 B: ἡ πῶς λέγομεν; and Smyth, *Greek Grammar for Colleges*, § 1879, a.

<sup>6</sup> 'ἐγὼ τυραννήσω σώματος ἐλευθέρου καὶ . . . ἀκουσαν ὑβριῶ;'

<sup>7</sup> 'δέσποινα Ἀφροδίτη, μέμψομαι (sic F, μέμψωμαι Reiske) σοι ἢ χάριν γνῶ;'

Two cases of the deliberative aorist subjunctive are found in the third person singular. One of them<sup>8</sup> does not conform to the classical rule that such third persons be the rhetorical equivalents of first persons, but has the futuristic or potential force found in the similar N. T. use. The other (41, 26) more closely approaches the classical idiom.

4. The subjunctive of cautious statement. This construction may appear once in Chariton, 75, 32: 'μὴ γὰρ <οὐ> τὰ δεσμὰ καὶ τὸν σταυρὸν ἐλεῶ σου, Χαιρέα' φησὶν 'ἀλλ' ὅτι τοιαύτης γυναικὸς ἀφηρέθης.'<sup>9</sup>

5. At this point it is convenient to include an account of the independent subjunctive with ἄν which seems to extend the deliberative function still further toward the potential force of an optative with ἄν. This use is recognized tentatively by Radermacher<sup>10</sup> and more positively by Reinhold.<sup>11</sup> It is significant that the four occurrences of this use in Chariton—all emended out of the text—represent a stereotyped formula in a rhetorical question. They are as follows: 71, 8: πῶς ἄν τις διηγῆσθαι κατ' ἀξίαν τὰ τελευταῖα τῆς πομπῆς; 99, 10: τίς ἄν φράσοι (sic) κατ' ἀξίαν ἐκεῖνο τὸ σχῆμα; 138, 21: τίς ἄν φράσῃ τὴν νύκτα ἐκείνην; 144, 26: τίς ἄν φράσῃ τὴν ἡμέραν ἐκείνην. To these we may add the indirect form in 115, 20: ἐσκέπτετο πῶς ἄν ἀσφαλῶς ἀπαγγείλῃ.<sup>12</sup> The

<sup>8</sup> 86, 8: 'τίς ἐπενέγκη σοι χοάς . . . ;'

<sup>9</sup> Two considerations have led me to insert <οὐ> into the text of F. (1) A parallel passage, 71, 19: πάντες οὐχ ὅτι τέθνηκε Χαιρέαν ἡλέουν, ἀλλ' ὅτι τοιαύτης γυναικὸς ἀφήρητο, shows that the first element of this passage must be negative. (2) Although Chariton frequently confounds the use of οὐ and μὴ in subordinate clauses, he never does so with a main verb. Even in modern Greek, independent οὐ and μὴ are carefully distinguished.

<sup>10</sup> *Gr. Gram. N. T.*, p. 160.

<sup>11</sup> *De Graecitate Patrum . . . Quaest. Gram.*, p. 111: "In locum optativi potentialis successisse videtur conjunctivus cum ἄν junctus (vel futurum cum ἄν)". He cites *Acta Thomae*, p. 209, 19 (Bonnet): τί γὰρ ἄν ποιήσῃ;

<sup>12</sup> Cf. Josephus, *Ant. Jud.*, II, 271: ἀπορῶ πῶς ἄν ιδιώτης . . . ἢ πείσω (ita omnes codices praeter solam codicis S tertiam manum) ἢ πῶς ἄν βιασαίμην. Also VIII, 379: πῶς ἄν ἐπιστρατεύσθαι. Schmid (*De Flavi Josephi Elocutione Observationes Criticae*, Fleckeisen's *Jahrbücher*, Supplementband XX, p. 423) who cites these passages considers the ἄν as a scribal addition. But so also twice in Lucian (Schmid, *Atticismus*,

proximity in effect of these subjunctives to the potential optative with *ἄν* is seen by comparison with the similar formula in 13, 3: *τίς ἂν οὖν ἀπαγγεῖλαι δύναιτο κατ' ἀξίαν τὴν ἐκκομιδὴν ἐκείνην*; <sup>13</sup>

### B. Dependent.

1. Substantive clauses of effect. The common classical usage of *ὅπως* and the future indicative never occurs in Chariton <sup>14</sup> but is replaced by the somewhat less common subjunctive with *ὅπως*, *πῶς* (never *ὥς*) or *ἵνα*. Thus the construction seems to occupy a position midway between the indirect question of the deliberative type <sup>15</sup> and the pure final clause, in which the distinction between objective effect and subjective purpose was lost. This development is best shown by citing first indirect deliberative questions introduced by other interrogatives than *πῶς*, then those with *πῶς*, and finally those with *ὅπως* and *ἵνα*.

a. In 131, 8: *οὐκ ἔχω παρὰ τίνος πύθωμαι*; and 141, 24: *τί ζητοῦμεν ποῦ φύγωμεν*; the indirect deliberative subjunctive is obvious. <sup>16</sup>

I, 244). What the relation is between this use and the "prospective" or "voluntative" subjunctive with *ἄν* the reader must decide. Cf. Sloty, *Konjunktiv und Optativ*, §§ 137 and 152 with examples from Polybius and elsewhere.

<sup>13</sup> So in indirect form 110, 22 f.: *σκεπτέον πῶς ἂν διαλλαγείην τῆς ἀνίας*. Cf. 79, 7. In 5, 8: *τίς ἀνὴρ μὴνύσειε τὴν ἐκκλησίαν ἐκείνην*; there is difficulty with the text. D'Orville's *τίς ἂν ἐρμηνεύσειε* is plausible although *μὴνύω*, "to disclose, report" is found twenty-five times in Chariton, while *ἐρμηνεύω* is unknown. Cf. below, p. 20, note 43.

<sup>14</sup> 45, 12 and 114, 21 are merely unsuccessful emendations of Hercher.

<sup>15</sup> The use of *πῶς*, the direct interrogative, in these clauses seems to me clear indication that at this time the construction was felt to be interrogative in origin. Cf., however, Kühner-Gerth, *Gr. Gram.*, § 552, Anm. 3. It is significant that *ὅπως* as a relative or indirect interrogative appears only twice in Chariton, each time without a verb, in 48, 30: *οὐκ οἶδ' ὅπως*, and 50, 21: *ὅπως δέ, μικρὸν ὕστερον ἐρῶ*. So in the N.T. *ὅπως* as the indirect interrogative appears once only (Blass-Debrunner, *op. cit.*, § 300, 1).

<sup>16</sup> In one case only is the optative found to represent the subjunctive in secondary sequence, 135, 8: *σκέψις προὔκειτο τῷ Διονυσίῳ τί καὶ πράξειε*. In 31, 28: *οὐκ εἶχεν ὃ τι πράξει* (F), Cobet would restore *πράξειε*. While this may be correct in view of the previous passage, and while the change is slight, still the deliberative future indicative is not impossible, and Chariton's use of the optative is very sparing. Cf. Xen.

b. In 45, 16: διαθήκας ἔγραφε τὰς τελευταίας, ἐπιστέλλον πῶς ταφῇ, the πῶς ταφῇ still undoubtedly represents the original concern of the writer—πῶς ταφῶ—though the indirect form after ἐπιστέλλον acquires the force of πῶς δεῖ ταφῆναι. In 89, 5: ‘σκεψόμεθα πῶς μὴ παρενδοκιμηθῶμεν,’ however, the original interrogative force, though faintly retained by the direct interrogative πῶς, has plainly acquired the meaning of desired effect, not to be distinguished from the classical idiom of ὅπως and the future indicative.

c. In 78, 34: ἔγραψε . . . ὑπισχνόμενος αὐτὸς στρατηγήσειν ὅπως ἀλλήλους ἀπολάβωσιν, the construction is that of the pure object clause of effect in the form especially common in Xenophon.<sup>17</sup> ἵνα is used in parallel construction with ὅπως here as in the purely final clauses. Thus 42, 23: ἰκέτευεν ὅπως συνέξέρη τινὰ τέχνην is varied by 108, 1: πολλὰ παρεκάλεσεν Ἀφροδίτην ἵνα βοηθῇ πρὸς τὸν νιόν.<sup>18</sup> In one case only does the optative appear in the clause of effect, 10, 24: πάντα μηχανώμενος ἵνα μὴ λάθοι.

2. Final clauses. Exclusive of the effect clauses noted above, there are eighty-two final clauses in Chariton, of which three are introduced by ὅπως, eight by μή, fifty-six by ἵνα, and fifteen by ἵνα μή. ὥς as a final particle does not appear. Although an optative in secondary sequence would be possible in forty-five cases, it never actually is found. There are only fourteen instances of the present subjunctive in this construction.

Peculiar uses, not regular in classical Greek, are confined to ἵνα clauses. They are as follows:

Eph., 358, 26: ἀντείχεν οὐκ ἔχουσα ὃ τι ποιήσει (F, ποιήσῃ Cobet), and 389, 9: ἀμχανῶν ὃ τι ποιήσει (F, ποιήσῃ Cobet) περιήει.

<sup>17</sup> Smyth, *Greek Grammar for Colleges*, § 2214. While there is no occurrence of ὅπως ἄν in this construction (Smyth, *op. cit.*, § 2215), 115, 20 cited above (p. 12) seems hardly distinguishable from this, and thus may be regarded as another connecting link between the deliberative question and the effect clause. 114, 21: ‘καὶ νύττε ὅπως ἀρέσῃς’ is emended by Hercher to βλέπε ὅπως ἀρέσῃς. From this discussion it is evident that the subjunctive of F must remain. It is possible that νύττε be read ἀνυτε, as hinted by D’Orville, since ἀνύτω is found in Chariton (119, 1) though not in this construction.

<sup>18</sup> Cf. also 45, 18: παρεκάλει δὲ Καλλιρόην ἐν τοῖς γράμμασιν ἵνα αὐτῷ προσέλθῃ κἀν νεκρῷ. παρακαλῶ takes either ἵνα or ὅπως in the N. T.

a. Fatalistic *ἵνα*.<sup>19</sup> Certain formulae occur in Chariton, employing the *ἵνα*-clause, in which divinity, or Τύχη, is charged with directing the life of the speaker with the purpose of bringing about the situation in which he now actually finds himself—e. g., 143, 5: 'εἰς ταύτην με τὴν ἡμέραν, Τύχη, τετήρηκας, ἵνα ἡ βασιλὶς κυρίαν ὀρῶ.' In effect, this differs but little from saying, *κακῶς εἰς ταύτην τὴν ἡμέραν τετηρημένη τυγχάνω, ὥστε ἡ βασιλὶς κυρίαν ὀρῶ*. The speaker, Queen Rhodogyne, does "behold her mistress," and she attributes her present misfortune in a fatalistic way to a past malicious purpose on the part of Τύχη.<sup>20</sup> Similar apostrophes to Τύχη,<sup>21</sup> and one to the sea<sup>22</sup> occur elsewhere, with the same specific imputation of malicious purpose.

In other passages Τύχη, or Fate, is not addressed directly in the second person, though the accusation is equally definite. So in 25, 31: 'τὸ δὲ περιβόητον κἄλλος ἐκτησάμην, ἵνα ὑπὲρ ἐμοῦ Θήρων ὁ ληστής μεγάλην λάβῃ τιμὴν.' As the context shows,<sup>23</sup> Callirhoë is here still railing at the cruelty of Τύχη, but her resentment is expressed less directly in the form of a bitter rationalization of her present misfortune. "It was for this, then, that Theron the pirate might make a big profit from me, that I was given (by Τύχη) my far-famed beauty." So in 94, 1: 'κἄλλος ἐπίβουλον εἰς τοῦτο μόνον ὑπὸ τῆς φύσεως δοθέν, ἵνα μου πλησθήσῃ<sup>24</sup> τῶν διαβολῶν,' and 85, 30: 'ἡ Ἑρμοκράτους θυγάτηρ ἐπράθην, καὶ . . .

<sup>19</sup> This term, in so far as I know, is a new one, and is intended to describe the peculiar usage about to be noted.

<sup>20</sup> This malice on the part of Τύχη is clearly described by Chariton in his introduction to Book VIII (136, 7 ff.): *ἔμελλε δὲ ἔργον ἡ Τύχη πράττειν οὐ μόνον παράδοξον ἀλλὰ καὶ σκυθρωπόν, ἵνα ἔχων Καλλιρόην Χαιρέας ἀγνοήσῃ καὶ τὰς ἀλλοτρίας γυναῖκας ἀναλαβὼν ταῖς τριήρεσιν ἀπαγάγῃ* (Her. ἀπάγῃ F), *μόνην δὲ τὴν ἰδίαν ἐκεῖ καταλίπη* κτλ.

<sup>21</sup> 85, 24: 'Τύχη βάσκανε, . . . σὺ με κατέκλεισας ἐν τάφῳ ζῶσαν, κάκειθεν ἐξήγαγες οὐ δι' ἔλεον, ἀλλ' ἵνα λησταῖς με παραδῷς.' 40, 25: 'ἔτι καὶ τοῦτό μου' φησὶ 'ταῖς συμφοραῖς, ὧ Τύχη, προστέθεικας, ἵνα καὶ τέκω δοῦλον.' Cf. also for the personal malice of Τύχη, 26, 3: 'ἐφοβήθης, ὧ Τύχη, μή τις ἰδῶν εὐγενῇ δόξῃ.'

<sup>22</sup> 60, 21: 'ὧ θάλασσα' φησὶ 'φιλάνθρωπε, τί με ἔσωσας; ἡ ἵνα εὐπλοήσας ἰδῶ Καλλιρόην ἄλλου γυναῖκα;'

<sup>23</sup> 25, 24 ff.: 'Τύχη βάσκανε, διὰ γῆς καὶ θαλάσσης τῶν ἐμῶν κακῶν οὐκ ἐπληρώθης κτλ.'

<sup>24</sup> If *πλησθήσῃ* be correct, it is the only case of the future indicative with *ἵνα* in Chariton.



ἐφελήθην, ἵνα ζῶντος Χαιρέου ἄλλω γαμηθῶ.<sup>25</sup> In these passages, although the fatalistic preoccupation is still strong, there is the beginning of sophistication, which easily turns into a mere rhetorical device—a sort of fatalistic irony of expression, whereby the sequence of past events, which, in non-rhetorical phraseology, *resulted* in the present situation, is credited with a certain malice which *intended* that situation.

The ultimate development of fatalistic ἵνα clause into a purely rhetorical figure occurs when the speaker builds up a fatalistic sequence to account for his present evil plight. So in 102, 30: ‘τίνα τῶν ὑποχθονίων θεῶν ἡσέβησα ἵνα εὐρῶ μοι νεκρὸν ἀντεραστήν;’, i. e., “I must have offended some infernal deity in order, as I now do, to find a dead man as my rival in love.”<sup>26</sup> In this passage the rhetoric may be semi-serious, but in the last passage to be quoted all genuine supernatural preoccupation is gone (107, 1): ‘πάνν γοῦν ἐμοὶ μέλει Χαιρέου καὶ Διονυσίου, . . . ἵνα βραβεύω τοὺς ἐκείνων γάμους καὶ ὁ μέγας βασιλεὺς ἔργον διαπράττωμαι προμνηστρίας γραΐδος.’ “A lot I must care for Chaereas and Dionysius, in order, as I now am doing, to manage their weddings, and, Great King though I am, carry through the work of an old-woman go-between.” This is sheer rhetorical self-mockery. Fatalism has become the hand-maid of rhetoric.

b. ἵνα of result. This “ecbatic” use of ἵνα in Biblical Greek has been explained as a Hebraism<sup>27</sup> and as a Latinism.<sup>28</sup> It has also been suggested that the choice of ἵνα to express what would normally be a consecutive relationship, is due to a semi-conscious acknowledgement of divine purpose.<sup>29</sup> This explanation comes very close to what in this paper has been called the fatalistic ἵνα. In the New Testament, however, there are many borderline cases which it seems impossible to fit absolutely into this

<sup>25</sup> The general context of these two passages likewise contains a direct address to Τύχη (93, 25: ‘Ἰδοῦ, Τύχη, καὶ κρίνομαι. οὐκ ἔρκει σοι διαβαλεῖν ἀδίκως με κτλ.’ 85, 24: ‘Τύχη βάσκανε, κτλ.’).

<sup>26</sup> Cf. 51, 14-18: ‘τίς ἄρα θεῶν ἀντεραστής μου γενόμενος Καλλιρόην ἀπενήνοχε καὶ νῦν ἔχει μεθ’ αὐτοῦ μὴ θέλουσαν, ἀλλὰ βιαζομένην ὑπὸ κρείττονος μοίρας; διὰ τοῦτο ἀφνίδιον ἀπέθανε, ἵνα μὴ νοήσῃ.’

<sup>27</sup> Cf. e. g., Abel, *Grammaire du Grec Biblique*, 79 f.

<sup>28</sup> Cf. e. g., Robertson, *A Grammar of the Greek N. T.*, p. 997.

<sup>29</sup> Moulton, *Prolegomena*, p. 210. Cf. Luke 9, 45: ἦν παρακεκαλυμμένον ἀπ’ αὐτῶν ἵνα μὴ αἰσθωνται αὐτό.

scheme. So likewise in Chariton there is a similar border-line case in 18, 21: 'καὶ γὰρ οὐδὲ ἀνθρώπινον τὸ κάλλος ἵνα λάθωμεν.' This may be conveniently compared with 81, 27: τὸ κάλλος τῆς γυναικὸς περιβόητον ὥστε τὴν ὕβριν μὴ δύνασθαι λαθεῖν. In the former passage the implication seems to be that Callirhoë's beauty is *not* human (i.e., not so created by Fate) that the kidnappers may escape detection.<sup>30</sup> In the latter there is merely an unimaginative correlation of present fact with its likely consequence, with no hint of divine direction.

All other cases of the *ἵνα* of result in Chariton are stylistic formulae in which the main verb is negative in force, denying or abjuring a fact or situation, which, if not so rejected, might lead to undesirable, unseemly, or even preposterous results. The only significant point of relationship between the fatalistic *ἵνα*-usage and this lies in the fact that, just as in the former construction there is an attempt in retrospect to rationalize a present undesired situation, so in the latter there is a forestalling of a future undesired situation, by denial of the antecedent prerequisites. There is no case in which the result indicated in the *ἵνα* clause is either desired by, or indifferent to, the speaker or subject of the main verb.<sup>31</sup>

Examples are as follows: 114, 29: 'μὴ γὰρ οὕτω' φησὶ 'μαινοίμην ἵνα ἐμαντὴν ἀξίαν εἶναι πεισθῶ τοῦ μεγάλου βασιλέως.' 43, 8: 'καὶ τίς οὕτως' εἶπεν 'ἀνόητος ἵνα τεκνοκτονίαν ἀντ' εὐδαιμονίας ἔλῃται'; 48, 15: 'οὐχ οὕτως εἰμὶ ἀχάριστος ἵνα μὴ ἐορτάσω τοὺς Καλλιρόης γάμους.' 97, 19: 'τίς οὕτως ἐστὶν ἀνόητος ἵνα ἔλῃται τὰ τηλικαῦτα ἀγαθὰ μίας ἡδονῆς ἕνεκεν ἀπολέσαι;' <sup>32</sup>

<sup>30</sup> Or, reversing the position of the negative, "Callirhoë's beauty *is* (made) divine that we may not escape."

<sup>31</sup> It is interesting to observe that the examples of the *ἵνα* of result quoted by Jannaris, *Historical Greek Grammar*, § 1758, from Lucian, who probably was a contemporary of Chariton, follow this same rule. Cf. *Amores*, 50 (II, 455 Hemst.): Μελητιδὴν ἢ Κόροιβον οἶει με πρὸς θεῶν, ἵνα τοῖς ὑπὸ σοῦ δικαίως κριθεῖσιν ἐναντίαν φέρω ψῆφον; *De Luctu*, 19 (II, 931 Hemst.): οὐχ οὕτως ἄσπορος οὐδὲ ἄκαρπος ἢ τοῦ Πλούτωνος ἀρχὴ οὐδὲ ἐπιέλοιπεν ἡμᾶς ὁ ἀσφόδελος ἵνα παρ' ὑμῶν τὰ σιτία μεταστελλώμεθα. I.e., the general formula is "*x* is not so *y* as it would have to be in order to *z*."

<sup>32</sup> This is distinguishable from 142, 15 only in rhetorical tone—'μὴ ποιήσειαν οἱ θεοὶ τοσαύτην ἐμὸν γενέσθαι μανίαν, ὥστε τὴν τῆς 'Ασίας βασιλίδι δούλην ἔχειν.'

<sup>33</sup> The use of *οὕτως* in all four of these passages stresses their proxi-

c. The appositional *ἵνα*-clause. This use, common in the N. T. and particularly in the writings of John, occurs once in Chariton, 110, 31: 'μὴ σύγε' ἔφη 'τοιούτο μηδὲν εἴπης, ἵνα γυναῖκα ἀλλοτρίαν διαφθείρω.' As in many of the N. T. examples, the *ἵνα*-clause expands an implied suggestion or command.

3. Substantive clauses with verbs of fearing. There are twenty such clauses with *μή* and the subjunctive, thirteen of which are after secondary tenses. The optative does not occur. The indicative appears twice<sup>34</sup> with *μή* to indicate the actuality of the event feared. Two interesting substitutes for the *μή*-clause are: 95, 30: ἐφοβοῦντο πάντες ὡς κολασθησομένης τῆς ἀσελγείας, ἂν εἰς κρίσιν εἰσέλθῃ, and 80, 16: καὶ μέντοι λειποθυμήσας ὁμῶς ἐκράτησε τὰ γράμματα, φοβούμενος ἄλλον αὐτοῖς ἐντυχεῖν. The use of the aorist infinitive with subject accusative to express a feared future event is hard to parallel in classical Greek prose, though Kühner-Gerth<sup>35</sup> cites two occurrences in Euripides.

4. Conditional and relative conditional protases with *ἄν* and the subjunctive. There are sixty-four such clauses, introduced by *ἄν* (20), *κἄν* (14), *εἰάν* (7), *ἐπ'άν* (1), *ἐπειδάν* (4), *ὅταν* (11), *ὅστις ἄν* (4), *ὅσος ἄν* (2), and *ὅποι ἄν* (1). There is no clear case of the use of *ἦν*.<sup>36</sup>

Nine of these only belong to the present general category, and are used chiefly in characterizing descriptions of general types—women, slaves, royalty, defendants.

The great majority (52) look to the future, and the apodoses

mity to, if not their identification with, true result constructions. Strangely enough, *οὕτως . . . ὥστε* never occurs in Chariton.

<sup>34</sup> 47, 27: φοβοῦμαι μὴ οὐδέπω μοι διήλλακται. 59, 25: φοβοῦμαι μὴ Θήρων ἡμᾶς διεψεύσατο καὶ τέθνηκεν ἢ δυστυχῆς. In the lacuna in sense found in 109, 20: 'ὡς ἀγωνιῶ μὴ τινα ἐπιβουλὴν' εἶπε βασιλεὺς 'καὶ μεγίστην, ἀλλ' οὐχ ὑπ' ἀνθρώπων, ἀλλ' ὑπὸ θεῶν,' the answer of the king suggests that some *indicative* verb is lost in Artaxates' remark. Possibly we may supply: 'ὡς ἀγωνιῶ μὴ τινα ἐπιβουλὴν <ἐπεβουλεύθης.' 'ἐπιβουλὴν γε' > εἶπεν βασιλεὺς κτλ.

<sup>35</sup> *Op. cit.*, § 398, Anm. 6.

<sup>36</sup> For 118, 4 see my article, "Some Conjectures for the Text of Chariton," *Class. Phil.*, XXVIII (1933), p. 309. In 120, 32, though *ἦν* appears in F, there is obvious corruption, so that I am inclined to accept Reiske's *ἄν*.



contain future forms, imperatives, or futuristic presents.<sup>37</sup> There is consequently little worth noting here.<sup>38</sup>

Three instances of the *αν* protasis demonstrate the intrusion of the subjunctive into present specific fact. 104, 8: 'γυναῖκα γάρ σε καλῶ, *κάν* ἕτερον φιλήσ.' 130, 7: 'τί τάρ μοι ὄφελος ἐπινικίων, *αν* σὺ . . . μὴ βλέπης.' 35, 29: 'συνήμι, *κάν* μὴ λέγης.'

5. Subjunctive with *ἕως*, *ἕως οὗ*, *μέχρις*, *πρίν*. Although but seven examples of this construction occur in Chariton, here as in the N. T., and occasionally in classical Greek, *αν* is not indispensable.

## II.

### OPTATIVE.

As one might expect at this period, the use of the optative is greatly circumscribed. Only fifty-nine<sup>39</sup> forms appear in Hercher's text, of which two are in Homeric quotations, and five<sup>40</sup> are emendations. Two<sup>41</sup> additional optatives in F have been emended out of the text. They may be classified as follows:

#### A. Independent.

1. Optative of wish. This construction is quite regular in Chariton. It is characteristic of the piety of his characters that of the total of fourteen instances ten are appeals, direct or indirect, to divinity. *εἰ γάρ* appears once with the optative to express a possible wish.

2. Potential optative. This construction is much commoner here than in the N. T.<sup>42</sup> Of the nineteen certain occurrences in

<sup>37</sup> E. g., 12, 8; 48, 26; 116, 8; 126, 32. In view of these there seems to be no need in 87, 9: 'κρίνη δὲ ἐπειδὴν καὶ Διονύσιος παραγένηται,' to follow D'Orville in emending to *κρινεῖ*.

<sup>38</sup> In two cases F offers the indicative with concessive *κάν*. 51, 31: 'κάν δύναιμι (δύνωμαι Hirschig) and 45, 11: 'κάν δεσπότης εἰ (ἦ D'Orville). In view of the dozen other cases of *κάν* with the subjunctive, and the fact that *εἰ* in the second passage is in any case incorrect, it seems best to accept the emendations. For the optative in secondary sequence, see below, p. 21.

<sup>39</sup> The total number of optatives in the N. T. is 67. Cf. Robertson, *op. cit.*, p. 1408.

<sup>40</sup> 31, 28; 71, 8; 99, 10; 138, 21; 144, 26. *Vid. supra*, p. 12.

<sup>41</sup> 22, 8; 98, 22.

<sup>42</sup> Nine occurrences in the N. T. confined to Luke and Acts. Cf.

Chariton, two omit the *ἄν.*<sup>43</sup> 118, 25: 'τάχα μὲν οὐδὲ Χαίρειας<sup>44</sup> γνοίη τὸ πραχθέν, ἀλλὰ καὶ γνοὺς οὐ ζηλοτυπήσει.' This may be paralleled in Lucian,<sup>45</sup> Longus, and Achilles Tatius.<sup>46</sup> In 54, 28: 'τίς οἶδεν εἰ χρεία γένοιτο καὶ δικαστῶν,' the interrogative formula *τίς οἶδεν εἰ* takes the place of *τάχα* in stressing the uncertain potentiality of the verb.

## B. Dependent.

1. Optative in indirect discourse. Here is to be seen the most striking evidence of the progressive disappearance of the optative. Out of the scores of instances of indirect quotation after secondary verbs there are just a dozen optatives, of which ten are in indirect questions. The sole case of a formally quoted statement<sup>47</sup> employing the optative is 149, 20: *ὑπεδήλου γὰρ ὡς ἄκουσα αὐτὸν καταλίποι.* The Codex Thebanus<sup>48</sup> which covers this passage reads: *ἐ[δηλώ]θη<sup>49</sup> γὰρ ὅτι ἄκου[σα κα]τέλιπεν.* Zimmernmann<sup>50</sup> is right in preferring the reading of F.

2. Optative with *εἰ* in *protasi*. There is nowhere an example of *εἰ* and the optative, followed by the optative and *ἄν.* Twice<sup>51</sup>

Robertson, *l. c.* The use disappears entirely in the *κοινή*. Cf. Blass-Debrunner, *op. cit.*, 385.

<sup>43</sup> This use is common in Homer, but doubtful in classical prose. Cf. Kühner-Gerth, *op. cit.*, § 225. Its frequent appearance from Polybius on is uncontested. Cf. Sloty, *Konjunktiv u. Optativ*, p. 85. Possibly a third example occurs in 5, 8. Cf. above, p. 13, note 13.

<sup>44</sup> As usual Cobet "normalizes" by adding *ἄν.*

<sup>45</sup> *Tim.*, 38. *Herm.*, 71. *Lex.*, 14. *Tox.*, 36, cited by Sloty, *l. c.*

<sup>46</sup> E. g., Longus 308, 18 (Herch.), Ach. Tat., 178, 6 (Herch.), etc., cited by Valley, *Ueber den Sprachgebrauch des Longus*, p. 33.

<sup>47</sup> The other indirect declarative optative, 148, 13, is in a causal clause with implied indirect discourse. Cf. Smyth, *op. cit.*, § 2242.

<sup>48</sup> Col. III, lines 26-27.

<sup>49</sup> This restoration is mine. It seems possible, although Wilcken ("Eine Neue Romanhandschrift," *Arch. f. Papyrusforschung*, I, 2, p. 234) indicates that there was space for *three* letters. The loss came, however, at the beginning of the line.

<sup>50</sup> "De Charitonis Codice Thebano," *Philologus*, LXXVIII (1922), p. 351.

<sup>51</sup> 83, 3; 83, 15. There is no reason for following the unrecorded emendation of Cobet in 22, 8: 'σοι γενέσθω τὸ κέρδος, εἴτε . . . θέλεις, εἴτε . . . ὑπολαμβάνεις (F. ὑπολαμβάνεις Cob.). See my article, "The Over-trustful Editors of Chariton," *T. A. P. A.*, LXII (1931), p. 73.

an apodosis contains a future indicative, and once<sup>52</sup> an aorist. Secondary sequence causes the substitution of *εἰ* and the optative for *ἐάν* and the subjunctive in two passages.<sup>53</sup> *εἰ πως* expressing the motive of action in secondary sequence occurs once.<sup>54</sup> In 148, 27: ὥσπερ γὰρ τις κεραυνῷ πεσόντος πρὸ τῶν ποδῶν αὐτοῦ μὴ παραχθείη, . . . εὐσταθῆς ἔμεινε, the corresponding reading of the Codex Thebanus is: ὥσπερ γὰρ εἰ τις . . . μὴ παραχθῇ κτλ. Zimmermann<sup>55</sup> accepts the subjunctive with *εἰ*, citing 118, 4: 'εἰ δὲ μὴ πισθῇς.' But this is itself very dubious, as I have demonstrated elsewhere,<sup>56</sup> and no further support of this construction is to be found in Chariton. Therefore I believe that the correct reading is: ὥσπερ γὰρ εἰ τις . . . μὴ παραχθείη.<sup>57</sup>

3. Optative with *ἵνα*. But one example of this occurs in Chariton.<sup>58</sup>

### III.

#### IMPERATIVE.

Of the 334 examples of the imperative in Chariton, very few deserve special mention.<sup>59</sup> The classical uses prevail here as in the N. T. The present imperative occurs 143 times, or about 43% of the total.<sup>60</sup> *μὴ* is combined with the present imperative ten times. One occurrence of *μή* and the aorist imperative

<sup>52</sup> 78, 24: 'εἰ μὲν οὖν ἔτι μνημονεύσεις, οὐδὲν ἔπαθον.'

<sup>53</sup> 16, 5 (bis); 137, 9.

<sup>54</sup> 116, 24.

<sup>55</sup> *Op. cit.*, p. 338.

<sup>56</sup> "Some Conjectures for the Text of Chariton," *Class. Phil.*, XXVIII (1933), p. 309.

<sup>57</sup> Richards, "Notes on the Erotici Graeci," *Class. Rev.*, XX (1906), p. 23, had already pointed out that "it is not *ἄν* but *εἰ* (ὥσπερ γὰρ <εἰ> τις) that is missing." Cobet, "Adnot. Crit. ad Char.," *Mnem.*, VIII (1859), p. 302, suggested *παραχθείς*, comparing 4, 3 and 71, 1. This is also possible.

<sup>58</sup> 10, 24. See above, p. 14.

<sup>59</sup> The third person always appears with the endings *-τωσαν* and *-σθωσαν*.

<sup>60</sup> An excellent illustration of the distribution of the tenses is seen in 77, 30 f.: 'ἐπιστολὴν γράψον αὐτῇ: χαρήτω, ζητήσάτω, καλέσάτω . . . βάδιζε καὶ γράφε.' Combination of aorist and present in the same sentence is not uncommon (e. g., 94, 19 ff.). Therefore Hercher's change in 22, 14: 'ἐλθὲ τοίνον . . . καὶ φίλος ἤδη γίνου (F. γενοῦ Her.) is probably unnecessary.

appears in F, —56, 1: 'μὴ οὖν ὑμεῖς . . . γένεσθέ μοι κτλ.,' where Naber<sup>61</sup> probably correctly would emend to γένησθε.

## IV.

## INFINITIVE.

There are almost exactly one thousand infinitives in Chariton. Great freedom in their use is exercised, particularly in their noun functions.

1. Approximately two-thirds of the total number are in the complementary construction with about eighty different verbs and a half-dozen adjectives. The verbs complemented by the infinitive ten or more times are: (ἐ)θέλω (89), δύναμαι (71), κελεύω (55), δοκεῖ (48), δεῖ (40), μέλλω (38), βούλομαι (33), σπεύδω (20), βουλεύομαι (14), ἄρχομαι (13), προσποιούμαι (12), χρῆ (12), τολμάω (10). In general the aorist tense is more frequent than the present.<sup>62</sup> After ἐλπίζω the future infinitive appears four times, the present once, and the aorist twice.<sup>63</sup> A peculiarity is the apparent use of the infinitive instead of the participle with φθάνω.<sup>64</sup>

2. Infinitive of purpose. This construction is an extension of the preceding construction. In Chariton as in the N.T. it appears in freer application to verbs of going, staying, sending, etc. E. g., 47, 10: 'ἦλθον . . . χάριν γινῶναι'; 12, 30: 'οὐδὲ θάψαι Καλλιρόην περιμένεις';<sup>65</sup> 122, 22: πέπομφε Διονύσιον ἀθροῖσαι, etc. So likewise the purpose function is expressed by the use of εἰς with the articular infinitive, a construction reminiscent of Latin.<sup>66</sup> The genitive of the articular infinitive alone to express purpose is not found.

<sup>61</sup> "Adnot. Crit. ad Char.," *Mnem.*, N. S. VI (1878), p. 200.

<sup>62</sup> μέλλω is followed by the present thirty times, by the future seven times, and once (47, 11) by the aorist in F, where Cobet in his misunderstood "collation" changed to the future. ἄρχομαι is followed by the present only.

<sup>63</sup> In 60, 26: παρὰ δεσπότου . . . ἤλπιζόν σε κομίσασθαι, the infinitive is emended to the future by Hercher. In view of 60, 23: τοῦτο οὐκ ἤλπισα γενέσθαι ποτέ, this seems unnecessary.

<sup>64</sup> 107, 3: ἀλλὰ ἔφθην ἀναδέξασθαι τὴν κρίσιν.

<sup>65</sup> περιμένεις is the reading of F, suppressed in Cobet's "collation." For its use with the infinitive cf. Plato, *Theaet.* 173 c.

<sup>66</sup> Cf. 125, 9: 'ζῶ εἰς μόνον τὸ λυπῆσαι'; 41, 5; 105, 18; 141, 8.

3. The infinitive of result. Twenty-one cases of the infinitive used with ὥστε occur. As in Arrian, and occasionally in Lucian,<sup>67</sup> ὥς is used as the equivalent of ὥστε three times in Chariton.<sup>68</sup>

4. The articular infinitive. This appears nearly fifty times, a remarkable frequency.<sup>69</sup> Its constructions include those of subject, object, appositional and separative genitive, dative of cause or means, and object of prepositions.<sup>70</sup> The first two constructions are equally common without the article.

5. Infinitive with πρίν. Sixteen instances of this construction occur including one case of the Ionic<sup>71</sup> πρίν ἤ (126, 20). In two places<sup>72</sup> the main verb is negative.

6. Infinitive of indirect discourse. The use of this infinitive after λέγω and εἶπον occurs eight times.<sup>73</sup> So too the infinitive appears four times<sup>74</sup> with ἀκούω. In view of this fact it would seem that the reading of F in 145, 6: ἴσθι οὐκ ἐμέ σοι τὸ δῶρον ἀλλὰ Καλλιρόην ἀποστέλλειν<sup>75</sup> may be correct.

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<sup>67</sup> Schmid, *Atticismus*, III, p. 85.

<sup>68</sup> 119, 16; 143, 25; 146, 23.

<sup>69</sup> This amounts to an average of .30 per Teubner page. This is exactly the frequency of occurrence in Aeschines, and greater than that of Andocides, Isaeus, and Lysias. Cf. Goodwin, *Greek Moods and Tenses*, p. 315, n. 1. A similar fondness for this very Attic idiom is found in Polybius, Appian, and Josephus. Cf. Schmid, *De Josephi elocutione*, p. 425.

<sup>70</sup> This last construction permits several equivalents for causal (διὰ + acc., e. g., 34, 25; 143, 14; ἐκ + gen., e. g., 83, 19), temporal (ἐν + dat., e. g., 68, 9; πρό + gen., e. g., 40, 27; 124, 8), and purpose clauses (εἰς + acc., cf. above).

<sup>71</sup> Stahl, *Krit.-hist. Syntax*, p. 446.

<sup>72</sup> 34, 3; 60, 17.

<sup>73</sup> After λέγω 9, 6; 28, 8; 29, 7; 101, 30; 108, 22; after εἶπον 19, 9; 105, 28; 152, 2.

<sup>74</sup> 90, 25; 124, 6; 124, 7 (*bis*).

<sup>75</sup> ἀποστέλλουσαν, believed by Hercher to be the reading of F, is merely one of Cobet's concealed emendations.

## PRESUPPOSITIONS OF ARISTOTLE'S PHYSICS.

An attempt is made in the paper which follows to do for Aristotle's physical writings what was done in a previous paper for the metaphysical.<sup>1</sup> The reader is referred to that study for a brief statement on the use of terms and the limits of the problem.

### I.

#### The methodological assumptions.

In the *Metaphysics* Aristotle makes it clear that when he talks about "knowledge" he means knowledge of the causes (*Met.*, 994 b, 29). At the same time he asserts that there is knowledge only of the changeless (*ibid.*, 1010 a, 9), which implies that in physics—as in ethics—complete accuracy is impossible. There is no way of telling whether the *Physics* or the *Metaphysics* is the earlier book, for, as every student of the subject knows, in two successive chapters of the former he refers to the latter first as subject matter already treated (*Phys.*, 191 b, 29; cf. *Met.*, 1017 a, 35) and second as subject matter which will be treated later (*Phys.*, 192 a, 36; cf. *Met.*,  $\Lambda$ , chapters 7-9).

The same formula for knowledge is given in the *Physics*, except that knowledge of the causes is equated with knowledge of the elements. This would seem to mean that physics is a purely formal science, unless the elements are distinguished from the causes, as logic would demand. The translators of the *Physics* in the Oxford series point out that in Book I, "first principle" (*ἀρχή*), "cause" (*αἰτιον*), and "element" (*στοιχείον*) are used synonymously (see their note on *Phys.*, 184 a, 12). This would agree with the formalism of the science, and Aristotle's comment in the *Metaphysics* that complete accuracy is impossible in physics would be logically contradicted.

When Aristotle comes to define the scope of physics, however, it is clear that he intends to make it only partly formal. The first presupposition we cite limits the field of discourse.

#### 1. *The motion of some of the natural.*

Ἡμῖν δ' ὑποκείσθω τὰ φύσει ἢ πάντα ἢ ἓνα κινούμενα εἶναι (*Phys.*,

<sup>1</sup> "Presuppositions of Aristotle's *Metaphysics*," *A. J. P.*, LV (1934), pp. 36-48.



185 a, 12). [We should assume that the things which exist in nature or some of them are moved.]

It is interesting to observe that he justifies this assumption by induction. If induction can give valid premises in a science, the subject-matter of that science cannot be metempirical. And if that subject-matter is in the realm of the changing, complete accuracy about it is impossible.

### 2. *The critical value of perceptual evidence.*

The empirical nature of the subject-matter of physics appears frequently throughout the physical treatises. Thus Empedocles is criticised (*Phys.*, 252 a, 22) for not adducing observed cases of the alternation of Love and Strife; Melissus (*ibid.*, 254 a, 24) for not following sense-perception when he denied motion and asserted the limitlessness of the existent; the Pythagoreans (*De Caelo*, 293 a, 25) for twisting observations to suit their theories.<sup>2</sup> At the same time Aristotle uses sense-perception for direct corroboration of theory. Thus (*De Caelo*, 295 b, 20) he appeals to it to show that the element earth remains at the centre and moves towards the centre. His formal proof of the earth's sphericity (*De Caelo*, 297 b, 23) is corroborated by sensory observation, and he appeals to fact to establish the existence of alteration (*De Gen.*, 314 b, 12). Perhaps the clearest statement of his empiricism is made in *De Caelo*, 279 b, 18: *μόνα γὰρ ταῦτα θετέον εὐλόγως ὅσα ἐπὶ πολλῶν ἢ πάντων ὁρῶμεν ὑπάρχοντα*. [For we should assert with reason only what we see occurring in many or all cases.]

### 3. *Ex nihilo nihil.*

*ἄλλο μὲν γὰρ ἐξ ἄλλου σῶμα γίγνεσθαι δυνατόν . . . ὅλως δ' ἐκ μηδενὸς ἄλλου προϋπάρχοντος μεγέθους ἀδύνατον* (*De Caelo*, 302 a, 3). [For it is possible for one body to be generated out of another . . . but it is impossible for a body to be generated from no other pre-existing corporeal quantity.]

Just what he means by "corporeal quantity" is not clear. Stocks translated the Greek equivalent "mass." The word is unqualified in this place, but he probably means spatial extension. In the *Physics* (255 b, 23) he speaks of the quantitative spreading out, as if volume were the distinguishing mark of corporeal

<sup>2</sup> Cf. his criticism of the *Timaeus* in *De Caelo*, 308 b, 27.

quantity. Yet in *De Caelo* (273 a, 24) weight is directly correlated with it, in the argument that an infinite body would have to have infinite weight. This may not be an inconsistency inasmuch as he probably means by an "infinite body" a body of infinite extent. The question becomes of primary importance in the history of science, for by the assumption of the postulate, *ex nihilo*, a search will always be made for the pre-existing out of which the post-existing was generated. It was not until Lavoisier's time, as is well known, that this concept was clarified.

4. *The principle of parsimony.*

The principle of parsimony appears not stated overtly but, as in the *Metaphysics*, by implication. In criticising the followers of Anaxagoras (*De Caelo*, 302 b, 21) Aristotle points out that there is no necessity of postulating an infinity of elements since a finite number will give the same results. This appears again in the *Physics* (259 a, 12) where the existence of one mover is said to be sufficient and hence is asserted. Our reasoning is weakened by Aristotle's prejudice in favor of the finite and the following assumption.

5. *The probability of the existence of the better.*

τὸ δὲ βέλτιον αἰεὶ ὑπολαμβάνομεν ἐν τῇ φύσει ὑπάρχειν (*Phys.*, 260 b, 22; cf. 259 a, 10). [We should always assume that the better occurs in nature.]

6. *The existential status of the subject-object relation.*

It would be difficult to put one's finger on any passage where this is asserted in so many words, but it is basic in arguments such as those which prove the existence of first matter, or (*Phys.*, A, chapter 6) the plurality of the principles.

It is clearly seen, when one considers presuppositions 4, 5, and 6, coupled with his prejudice against infinity,<sup>3</sup> why he asserts the unknowableness of the infinite (*Phys.*, 187 b, 7). His attitude differentiates his philosophy from that of Plotinus and his disciples as well as from that of most of the mediaeval Christian philosophers for whom "infinite perfection" not only made sense but was eulogistic.

<sup>3</sup> See the ridicule he expressed of Melissus in *Phys.* 207 a, 15.



## II.

## The nature of change.

1. *The fourfold nature of change.*

τρία γάρ ἐστιν ἃ λέγεται κατὰ τὴν μεταβολήν, τό τε μεταβάλλον καὶ ἐν ᾧ καὶ εἰς ὃ μεταβάλλει (*Phys.*, 236 b, 2). [For there are three things to be noted in change, that which suffers the change, that in which the change takes place, and that into which it changes.]

In this account of change no mention is made of the agent. The agent appears in *De Caelo* (288 a, 27), but the concept of an agent is presupposed in the doctrine of the four causes. We have then an agent, a patient, a medium, and an effect, as prerequisites to all change. The importance of this theory lies in the orientation which it gave to science away from the historical description of events towards their "explanation." For when one of the members of the tetrad was missing, it had to be invented. The analysis was partly implicit in the philosophy of Empedocles who also seemed to believe that nothing would change "of its own accord" and assumed the existence of two agents (Love and Strife) to change his four inert patients (the elements).

The importance of the medium (Time) is that there can be neither motion nor rest in a moment (*Phys.* throughout, but esp. 236 b, 20; 234 a, 24 ff.). This gives rise to a peculiar problem. Aristotle believes that there are four kinds of change: local motion (change of direction), increase and diminution (change of quantity), genesis and destruction (change of form), alteration (change of quality).<sup>4</sup> But these four types of change are all types of motion, as he says following his famous definition of motion, ἡ τοῦ δυνάμει ὄντος ἐντελέχεια, ἧ τοιοῦτον, κίνησις ἐστιν (*Phys.*, 201 a, 10).<sup>5</sup> This would imply that alteration, as a kind of motion, takes time. And Aristotle does indeed speak of the process of alteration as occurring in time (*Phys.*, 249 a, 29) and

<sup>4</sup> This is a commonplace of the physical writings. See esp. *Phys.*, 201 a, 3.

<sup>5</sup> In *Phys.*, 236 b, 19, Aristotle flatly asserts that all change (τὸ μεταβάλλον) takes place in time, making no distinction between κίνησις and other forms of change. In *Phys.*, 243 a, 6 he makes alteration a species of motion. See also his argument against Melissus (*Phys.*, 214 a, 26), in which the plenum is said to be capable of κίνησις since it is capable of alteration.

clearly indicates that the speed of some processes of alteration is greater than that of others. Yet alteration is always the appearance or disappearance of a "floating quality" and, like all change (see below), can only occur between opposites. Consequently alteration must be instantaneous. For the qualities are eternal and come and go as atomic blocks. And in fact when Aristotle argues against Melissus (*Phys.*, 186 a, 15) he definitely asserts the possibility of sudden change (*ἀθρόας . . . μεταβολῆς*).

## 2. *The polarity of change.*

ἡ δὲ μὴ κατὰ συμβεβηκὸς <μεταβολή> οὐκ ἐν ᾗπασιν, ἀλλ' ἐν τοῖς ἐναντίοις καὶ ἐν ἀντιφάσει (*Phys.*, 224 b, 28; *De Gen.*, 324 a, 3. Cf. *Phys.* A, chapter 5, esp. 188 a, 31 ff.; 188 b, 25). [Non-accidental change is not in all things, but only in the opposites and in contradiction.]

That change always occurs between opposites is fundamental to Aristotle's thought and is used to prove among other things that where there is no opposition there is no change (*Phys.*, 225 a, 10). But opposition always occurs within a given genus, so that only certain changes are possible, once the subject of the change is known, and all change is predictable. It is on this basis that one can reason out the generation of the elements from the primary qualities. Thus since Fire is dry and warm, if it looses its dryness it can only become wet and warm, which means that it has become Air. This provides the logical structure of much of the *Meteorology*.

## 3. *The underlying substratum of change.*

The underlying substratum has been discussed in our treatment of the *Metaphysics* and is constantly used in the physical writings (e. g., *Phys.*, 190 a, 15; *ibid.*, 35; *De Gen.*, 314 B, 26). It is probably derived from the grammatical subject and provides something for the qualities to qualify.

## 4. *Denial of action at a distance.*

οὔτε γὰρ ποιεῖν ταῦτα καὶ πάσχειν δύναται κυρίως ἂ μὴ οἷόν τε ἄψασθαι ἀλλήλων (*De Gen.*, 322 b, 23). [It is not right to say that such things as do not touch one another can act upon or be acted upon by one another.]

This shows very clearly the metaphorical basis of Aristotle's

physics. The agent is thought of as a human agent which mechanically operates upon a given patient. Such an axiom oriented European thought in the direction of corporeal causes for every change and was therefore ultimately responsible for such a problem as that of the mind-body relation as it was phrased in Seventeenth Century metaphysics. That problem arose because of the difficulty of making intelligible the contact between a corporeal and an incorporeal substance.

### III.

#### The Natural.

##### 1. *The absence of chance in nature.*

ληπτέον δὴ πρῶτον ὅτι πάντων τῶν ὄντων οὐθέν οὔτε ποιεῖν πέφυκεν οὔτε πάσχειν τὸ τυχὸν τοῦ τυχόντος. οὐδὲ γίνεται ὅτιοῦν ἐξ ὀτουοῦν, ἀν μὴ τις λαμβάνῃ κατὰ συμβεβηκός (*Phys.*, 188 a, 31. Cf. *De Caelo*, 290 a, 31; 291 b, 14; 301 a, 5). [It should be granted first that of all beings no chance thing acts upon or is acted upon by any other chance thing, nor is anything produced at random out of anything, unless one is speaking of accidental events.]

This axiom does not mean that there is no such thing as chance. It simply means that chance events are not natural. An accidental or artificial change may pervert a natural process from its logically determinable end, but such events need not form—and indeed cannot form—any part of science. Modern science reproduces this axiom in the disregarding of coincidences or unusual events.<sup>6</sup>

##### 2. *The orderliness of nature.*

οὐδέν γε ἄτακτον τῶν φύσει καὶ κατὰ φύσιν· ἡ γὰρ φύσις αἰτία πᾶσι τάξεως (*Phys.*, 252 a, 11). [There is nothing disorderly in the things existing in nature and according to nature. For nature is the cause of the order of everything.]

This axiom is logically related to II, 1. For by "order" Aristotle means "logical order." It is an assertion of the inherence of his logic in nature: the fixed species, the laws of thought, and the consequent applicability of *a priori* reasoning to objective events. But Aristotle is nevertheless committed to

<sup>6</sup> Aristotle also warns us of the incredibility of coincidence (*De Caelo*, 289 b, 22.).

the view that observation must corroborate reasoning and, since he admits the possibility of chance or unnatural events, he is forced to suggest a technique for distinguishing between the natural and the unnatural. This technique in modern language is curiously enough statistical, for we find (*De Caelo*, 301 a, 7) that the nature of things is the nature which most of them possess most of the time. Aristotle never gives a satisfactory explanation of why all things do not possess their nature all the time, but we may surmise that he has retained sufficient of his master's teaching to attribute unnaturalness to the influence of matter.

### 3. *The goodness of nature.*

ἡ φύσις ἀεὶ ποιεῖ τῶν ἐνδεχομένων τὸ βέλτιστον (*De Caelo*, 288 a, 3).  
[Nature always does the best possible thing.]

Aristotle uses this axiom with a certain reluctance to explain the direction of the heavenly motion. Having stated the absoluteness of directions (*De Caelo*, B, chapter 2) and the superiority of up to down, right to left, front to back,—recalling the Pythagorean table of opposites in *Metaphysics*, 986 a, 22—he attributes to the heavens the superior direction because their direction must be the best.

### 4. *The naturalness of both contraries.*

τῶν γὰρ ἐναντίων εἰ θάτερον φύσει, ἀνάγκη καὶ θάτερον εἶναι φύσει (*De Caelo*, 286 a, 23). [If one of the opposites is natural, the other must be natural too.]

Aristotle uses this to prove that if earth exists, fire must also exist, since fire is the opposite of earth. But he also argues that fire is somehow more real than any of the other elements.<sup>7</sup> It is that element which corresponds to form while Earth corresponds to matter, being respectively the absolutely light and the absolutely heavy (*De Caelo*, Δ, chapter 4). But the form is of course better than the matter; and, if both contraries are natural, we find the evil to be as natural as the good. It will be remembered that this hint of a natural hierarchy is carried out in neoplatonism.

<sup>7</sup> There is a hint of the hierarchy of reality in *De Gen.*, 318 b, 27, where Water and Air are held to be more real than Earth.

5. *The priority of the natural.*

ἵσπερον τὸ παρὰ φύσιν τοῦ κατὰ φύσιν (*De Caelo*, 286 a, 18).

"Priority" in Aristotle is a term not only descriptive but also normative (cf. *Met.*, 999 a, 13). In the *Metaphysics* Aristotle makes the mover (1010 b, 37), the essential (1065 b, 2), the changeless (1063 a, 13), the form (1035 a, 7) all prior. In the physical writings we find (*Phys.*, 265 a, 22) that the completed (τὸ τέλειον) is prior in nature, in logic, and in time to the uncompleted (cf. *Met.*, 1072 b, 35), the imperishable to the perishable, the positive to its privation (*De Caelo*, 286 a, 26), the one to the many within a genus, the simple to the complex (*ibid.*, 286 b, 16). "Priority," though ambiguous, seems to derive its several meanings from "logical priority" rather than chronological,<sup>8</sup> and indeed Aristotle is only occasionally concerned with the historical order of events, since time is the measure of motion and motion is but the process of realizing the potential. It belongs therefore to a lower order of being. The unnatural, since it is posterior to the natural, has this inferior kind of existence. Nothing can be argued from it, no standards derived from it, no laws erected upon it. One is therefore prepared to find the following three assertions made about it.

6. *Nothing unnatural is eternal* (*De Caelo*, 286 a, 17).

7. *Nothing unnatural appears to exist for an unlimited time* (*ibid.*, 288 b, 23).

8. *Incapacity (ἀδυναμία) is unnatural* (*ibid.*, 288 b, 24).

It is perhaps unnecessary to point out that "eternity" and "unlimited time" are not synonymous. The eternal is non-temporal in the sense that logic and mathematics are non-temporal. Unlimited time is still time and would measure change. Hence there might be accidental and irrational events in unlimited time but not in eternity.

The logical status of the eternal appears in Aristotle's elimination of chance and spontaneity from it.

9. *The necessity of the eternal.*

εἰ μηδὲν ὡς ἔτυχε μὴδ' ἀπὸ ταυτομάτου ἐνδέχεται ἐν τοῖς αἰδίοις εἶναι, κτλ. (*De Caelo*, 287 b, 24).

<sup>8</sup> But see *Categories*, 14 a, 27.

The passage in which this condition is introduced concerns the movement of the heavens and Aristotle is obviously worried by his attribution of eternity to something which looks like change. He alleviates his distress by arguing that the motion of the heavens is the best possible and that it is uniform. But the best possible is the formal—and the motion of the heavens is the form of all other motions. Its uniformity is the manifestation of the “primary and simple and ungenerated and indestructible and wholly changeless” (*De Caelo*, 288 a, 34). Thus the circular motion of the heavens is a sort of Platonic paradigm of motion of which other motions are inadequate embodiments.

This list of presuppositions does not include one or two which have to do with non-physical matters. There may be a few omissions of physical axioms. But most of the arguments of the physical theories can be deduced from the list given when fortified by selection from the presuppositions of the *Metaphysics*. Certain features of Aristotle's thinking stand out with special clearness: the objectification of his logic, the fusion of normative and descriptive terms, and certain inevitable inconsistencies in his account of change. When a survey is made of the presuppositions of his other writings the influence of his metaphysical and physical theories will be more apparent.

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## ON CERTAIN MATHEMATICAL TERMS IN ARISTOTLE'S LOGIC.<sup>1</sup>

### PART I

Mathematics in Aristotle's time was being reduced to a strictly deductive science.<sup>2</sup> It was, moreover, much cultivated in the Academy, where important work was done.<sup>3</sup> It is not surprising, then, that it should have exercised a great influence on Aristotle's method, ideas, and terminology, as he worked out his science of deductive proof.

As nothing but scanty fragments of pre-Aristotelian mathematics remain, it is often difficult to find external evidence for the existence of a given mathematical term during or before the time of Aristotle. The fragment of Hippocrates of Chios,<sup>4</sup> if the language is Hippocrates' and not Eudemus',<sup>5</sup> shows that the term *ὑπόκειται* and the designation of parts of figures by letters, together with certain syntactical and stylistic characteristics, were in use before Plato's time;<sup>6</sup> but for such important

<sup>1</sup> This study was begun during my tenure of a Sterling Fellowship at Yale University, and completed while a Junior Fellow at Harvard. I take this opportunity of thanking Professor W. D. Ross for his great kindness in reading through an early draft of the manuscript and giving me the benefit of his detailed criticism.

<sup>2</sup> Cf. J. L. Heiberg, "Mathematisches zu Aristoteles," p. 4 f, in *Abh. zur Gesch. d. math. Wiss.*, XVIII (1904), and H. G. Zeuthen, "Hvorledes Mathematiken i Tiden fra Platon til Euklid blev rationel Videnskab," in *Mémoires de l'Académie Royale des Sciences et des Lettres de Danemark*, Section des Sciences, 8me série, t. I, no. 5 (1917).

<sup>3</sup> A list of mathematicians connected with the Academy is given by Proclus (*In Primum Euclidis Elementorum Librum Commentarii*, p. 67, 8 ff. [Friedlein] hereafter cited as Proclus, in *Eucl.*). Cf. P. Tannery, *La géométrie grecque*, pp. 130 ff.

<sup>4</sup> Ap. Simplicius, *Comm. in Aristotelis Physica* [Diels], pp. 61 ff. Latest edition: F. Rudio, *Der Bericht des Simplicius über die Quadraturen des Antiphon und des Hippokrates*, Teubner, 1907.

<sup>5</sup> Even here we cannot be sure that the expressions are Hippocrates' and not Eudemus'; *ἐγγράφειν* is used for 'inscribe' in accordance with Aristotle's usage and presumably Eudemus', while Plato has *ἐντείνειν*.

<sup>6</sup> For *ὑπόκειται* cf. p. 58-17, 64-12, Rudio; for the use of the letters with the article only cf. 58, 14R; 62, 19R; for the construction *τὸ ἐφ' ᾧ Α* or *ἐφ' οὗ Α* cf. 58, 6R; 60, 21R. Further, the use of *ἔστω* (59, 5 Rudio) *κείσθω* (58, 9R), *πίπτειν ἐπὶ c. acc.* (58, 12R) can be noted.

mathematical terms as *λήμμα*, *ἀξίωμα*, *αἴτημα*, *πρότασις*, *ἀντιστρέφω*, *ἐκθεσις*, and *συμπέρασμα* we have only the testimony of post-Aristotelian mathematicians, themselves so thoroughly influenced by the Aristotelian terminology that they cannot be considered reliable witnesses to a purely mathematical tradition of language. A further difficulty is the fact that Euclid, Archimedes, and Apollonius had but little occasion to put into writing certain terms for general mathematical procedures, such as *συμπέρασμα*, *ἀναλύνειν*, and *ἀντιστρέφειν*, although these terms were current in their times.<sup>7</sup> In much the same way, an orator will only incidentally, and as it were by accident, use the technical language of rhetoric in a public address. Much of the older terminology may have perished completely,<sup>8</sup> as Euclid was the standard for all later ages,<sup>9</sup> and his systematic and well organized terminology dispensed with much of what had been current before his time. It is obvious, for instance, that he avoids the word *ὅρος*, for term of an *ἀναλογία*, which occurs in Plato and Aristotle,<sup>10</sup> but only once in the *Elements*; <sup>11</sup> that he prefers *ἡγούμενος* and *ἐπόμενος* (antecedent and consequent) in the discussion of progressions to their equivalents *μείζων* and *ἐλάττων*; <sup>12</sup> and there are indi-

<sup>7</sup> For *ἀνάλυσις*, *ἀναλύνειν* and *συμπέρασμα* cf. s. vv. in Heiberg's index, vol. III of his edition of Archimedes; for *ἀντιστροφή* cf. Apollonius, *Conica*, I, p. 284, 19, Heiberg.

<sup>8</sup> The words *ἐντείνω*, for inscription, and *παραινέω*, for the Euclidean *παραβάλλω*, occur to my knowledge only in Plato (*Meno*, 87a, *Rep.* 527a) and writers dependent on him (as Proclus, in *Eucl.*, pp. 79-80). The expression *ἐμάθομεν* (*Sect. Can.*, *Euclidis Opera*, viii, p. 162, 3 and 164, 8 [Menge-Heiberg]), to refer to a previous theorem, is found only once in Euclid's *Elements* in an interpolated passage (*Elem.*, X, 10 [iii, p. 32, 15, Heib.]; cf. *id.* Prol. crit., V, lxxx). It may very well be of considerable antiquity, as it is easily connected with *μαθήματα* in the sense of mathematics. Certain words, such as *ἐτερόμηκες*, *ρόμβος*, and *τραπέζιον*, occur but once in Euclid (cf. Heiberg, *Math. zu. Ar.*, p. 11).

<sup>9</sup> For Apollonius cf. T. L. Heath, *Apollonius of Perga*, p. xev. The dependence of Archimedes is shown, among other things, by his exact agreement with Euclid in the terminology of proportion.

<sup>10</sup> Aristotle, *E. N.* 1131b5 ff.; Plato, *Phileb.* 17c11 (applied to music).

<sup>11</sup> V, def. 8.

<sup>12</sup> In discussing geometric progressions Euclid often uses concomitantly two sets of designations to distinguish the terms: *μείζων* and *ἐλάττων*, and *ἡγούμενος* and *ἐπόμενος*. As his phrase is (*Elem.*, VII, 21, 24, 30, 34; VIII, 1, 4, 8, 21) *ὁ τε μείζων τὸν μείζονα καὶ ὁ ἐλάττων τὸν ἐλάττονα, τουτέστιν ὁ τε ἡγούμενος τὸν ἡγούμενον καὶ ὁ ἐπόμενος τὸν ἐπόμενον*,

cations that λόγος (in the sense of ratio) has been substituted, most probably by some predecessor, for διάστημα, which does not occur in this sense in the *Elements*.<sup>12a</sup>

Aristotle's terminology, as has been recognized,<sup>13</sup> was in part

it is likely that ἡγούμενος, and ἐπόμενος are meant to explain μείζων and ἐλάττω (which are strictly after all subject to misapprehension, as "greater" and "smaller" might be taken to refer not to the two numbers in the same ratio, or λόγος, but to the actual size of numbers anywhere in the ἀναλογία). Μείζων and ἐλάττω, then, as requiring explanation, would be the older terms, and this presumption is confirmed by the fact that ἡγούμενος and ἐπόμενος are sometimes used alone, as being the more natural terms (IX, 12, 16, 17, 19, 36). In the theorem to which these words refer, however (VII, 20), μείζων and ἐλάσσων are used alone, as it was no doubt evident from the proof what was meant. Further in the theory of alternate and inverse ratio (Eucl. *El.*, V, def. 12 and 13) antecedent and consequent are more convenient terms than μείζων and ἐλάττω.

<sup>12a</sup> Διάστημα and ὅρος were used in the descriptions of intervals in music (Plato, *Philebus*, 17c11; Aristoxenus, *Harm.*, 70, 25 [Marquard]). In Archytas, fr. 2 we have μείζονων ὅρων διάστημα (p. 335, 4 and 12 [Diels]) used generally to cover all three progressions. The term for ratio in Aristotle is λόγος (*E. N.* 1131a31). In case διάστημα was the older word (as the presence of such a term as ὅρος, literally "boundary stone"—to mark off the distances—would suggest), and λόγος was later substituted for it, we should have an explanation of the origin of the phrase διπλασίων λόγος used by Euclid (*Elem.*, V, def. 9; cf. def. 10; VI, 20; X, 9). Taking a geometrical progression represented by equal distances (διαστήματα) between points representing the terms (ὅροι), we should find that by doubling the distance we obtained a duplicate ratio, that is,  $a^2:b^2$  instead of  $a:b$ . The ratio  $a^2:b^2$  would be a διπλάσιον διάστημα, then, and by substitution of λόγος, a διπλασίων λόγος. That with the word λόγος alone, unaccompanied by any notion of distance, we should not obtain such a meaning for "double ratio," appears from the fact that διπλάσιος λόγος actually does occur in a different sense, and that it was to distinguish the two uses that the form διπλασίων was introduced (cf. Sir T. L. Heath, *The Thirteen Books of Euclid's Elements*, II<sup>2</sup>, 133). Cf. also Paul Tannery in *Bibl. Math.* 3, Folge 3 (1902), pp. 162 ff. It was perhaps through a τριπλάσιον διάστημα that Hippocrates conceived the idea of reducing the problem of duplication of the cube to that of finding two middle proportionals between a given line and its double. Here the proportion would be  $a:x::x:y::y:2a$ , and  $2a:a$  is the "triple distance" of  $x:a$ , or  $x^3:a^3$ . Then  $x^3$  equals  $2a^3$ , and  $x$  is the side of the cube whose volume is twice that of the cube whose side is  $a$ .

<sup>13</sup> Diels, *Elementum*, p. 20.

developed in the Academy. But the Academy produced several mathematicians of importance,<sup>14</sup> and its members must have used mathematical terminology either traditional or devised in part by themselves.<sup>15</sup> The difficulty then arises, for words traceable in a mathematical sense to the Academy and in a dialectical sense to Aristotle, as to which is the original meaning; and it is usually extremely difficult to decide, as in the frequent absence of external evidence the origin of the term must be determined by its own superior applicability to the one field or the other.

The words *ἀνάλυσις*, *ἀναλύειν*, and *ἀναλυτικά* are almost certainly of mathematical origin, as was recognized long ago.<sup>16</sup> In *E. N.* 1112b20 the mathematical connection of the word is clear: ὁ γὰρ βουλευόμενος ἔοικε ζητεῖν καὶ ἀναλύειν τὸν εἰρημένον τρόπον (i. e. as described *ib.*, 15, working back from the result aimed at) ὥσπερ διάγραμμα.<sup>17</sup> The analysis as described here corresponds to the description of mathematical analysis given by Pappus.<sup>18</sup> Proclus attributes the discovery of this procedure to Plato.<sup>19</sup>

<sup>14</sup> Theudius of Magnesia is supposed to have written the text-book of the Academy (Sir T. L. Heath, *op. cit.*, I<sup>2</sup>, p. 117), and Menaechmus is supposed to have been the first to deal with the conic sections (the fragments have been collected by M. C. P. Schmidt in *Philologus*, XXXII (1884), pp. 72-81).

<sup>15</sup> Cf. Heiberg, *op. cit.*, who believed that it was through Plato's influence that *σημεῖον* was finally substituted for *στιγμή* (p. 8).

<sup>16</sup> Blancanus, *Aristotelis loca mathematica*, p. 35 f. (Bologna, 1615), suggested the mathematical derivation and is followed by Waitz (*Organon*, I, p. 366), and F. Solmsen, *Die Entwicklung der aristotelischen Logik und Rhetorik*, p. 123 and n. 2. Cf. Susemihl and Hicks, *The Politics of Aristotle*, note on 1252a18.

<sup>17</sup> Cf. *Soph. El.* 175a26 ff. συμβαίνει δέ ποτε καθάπερ ἐν τοῖς διαγράμμασιν: καὶ γὰρ ἐκεῖ ἀναλύσαντες ἐνλοτε συνθεῖναι πάλιν ἀδυνατούμεν . . . for the mathematical connection of the word.

<sup>18</sup> Pappus, *Collect.*, VII (vol. 2, p. 634 Hultsch): ἀνάλυσις τοῖνον ἐστὶν ὁδὸς ἀπὸ τοῦ ζητουμένου ὡς ὁμολογουμένου διὰ τῶν ἐξῆς ἀκολουθῶν ἐπὶ τι ὁμολογουμένον συνθέσει· ἐν μὲν γὰρ τῇ ἀναλύσει τὸ ζητούμενον ὡς γεγονὸς ὑποθέμενοι τὸ ἐξ οὗ τοῦτο συμβαίνει σκοπούμεθα καὶ πάλιν ἐκείνου τὸ προηγούμενον, ἕως ἂν οὕτως ἀναποδίζοντες κατανήσωμεν εἰς τι τῶν ἤδη γνωριζομένων ἢ τάξιν ἀρχῆς ἐχόντων. Cf. F. M. Cornford's excellent discussion of this passage in "Mathematics and Dialectic in the *Republic* VI-VII," *Mind*, XLI (1932), pp. 46 ff.

<sup>19</sup> *Op. cit.*, 211, 21 (μέθοδος ἡ διὰ τῆς ἀναλύσεως) ἦν καὶ ὁ Πλάτων ὡς φασιν Λεωδάμαντι παραδέδωκεν. Whether Plato actually discovered it or not, we may be fairly certain it was used by Leodamas.

In the game of Socratic debate as practiced in the Academy, it was the custom to set up a statement, such as "pleasure is good," called *θέσις* or *πρόβλημα*,<sup>20</sup> which was attacked by one party, the questioner, and defended by the respondent. The *Topics* is a handbook for this kind of dialectic, and the point of view of the dialectician is always taken into account in the *Prior Analytics*. It is clear that the questioner would have to discover his arguments by a method exactly parallel to that of analysis in geometry: he would have to take the conclusion he wished to establish and work back from it until he reached a group of premises he felt sure would be acceptable to his interlocutor.

Such would perhaps be the most natural explanation of *ἀνάλυσις* and *ἀναλυτικά* as used of the syllogism, and no doubt this sense was present in Aristotle's mind as he worked out his doctrine, but the actual usage of the word in the *Analytics* is somewhat different.

The passage from 46b38 to 51b5 of the first book of the *Prior Analytics*, where *ἀνάλυσις* is discussed, is introduced with the following words: "It is clear from the foregoing what the elements of demonstrations are and why, and further what things we must consider in the case of each *πρόβλημα* (i. e. thesis [or conclusion] determined in quantity and quality); it remains to say how we shall reduce (*ἀνάξομεν* = *ἀναλύσομεν*) reasonings to the aforementioned figures, for this part of our investigation still remains to be treated. For, if we should both understand the way syllogisms come into being, and should be able to dis-

<sup>20</sup> *Topics*, 120b18; cf. 104b7, 104b35. The reasons for believing that the dialectical game was practised in the Academy are (1) Plato's interest in the procedure and (2) the presence of many titles dealing with dialectics in the works of Xenocrates and Aristotle (for Xenocrates cf. Diog. Laert., IV, 13: λύσις τῶν περὶ τοὺς λόγους ι'; λύσεις α'β'; θέσεων βιβλία κμγ'; τῆς περὶ τὸ διαλέγεσθαι πραγματείας βιβλία, ιδ', μαβψμ'; for Aristotle we have in the *Topics* a dialectician's handbook, or a τέχνη διαλεκτική, and among the lost works such titles as ὑπομνήματα ἐπιχειρηματικά γ' (D. L., V, 23), <περὶ> ἐρωτήσεως καὶ ἀποκρίσεως α'β' (D. L., V, 23), θέσεις ἐπιχειρηματικά κε', θέσεις ἐρωτικά δ', θέσεις φιλικὰ β', θέσεις περὶ ψυχῆς α' (D. L., V, 24), to go no further. The game as presented in the *Topics* must have centered in the Academy, as the works of Plato are everywhere touched upon. Cf. E. Hambruch, *Logische Regeln der Platonischen Schule in der Aristotelischen Topik*, Programm, Berlin, 1904.



cover them (cf. the use of *εὑρίσκω* in rhetoric), and in addition should (be able to) reduce reasonings that have already been made to the aforementioned figures, our initial purpose would be attained."<sup>21</sup>

In these words Aristotle is proposing to take *συλλογισμοί* as found and reduce them to the three syllogistic figures. He is here using the word *συλλογισμός* loosely, for reasoning in general, and is probably referring especially to a method of taking an argument found in some philosophical or technical author and reducing it to a syllogism in one of the three figures. Similarly, the works entitled *προτάσεις*<sup>22</sup> probably contained collections of premises gathered from the writings of philosophers and the generally received opinions of mankind, for use as reference material in preparation for debates or as *ἐνδοξα* to be discussed and reconciled in a philosophical treatise.<sup>23</sup> Jaeger has called attention to Aristotle's recasting a passage of the *Euthydemus* into syllogistic form.<sup>24</sup>

The procedure recommended by Aristotle for the analysis of syllogisms is first to discover the two premises—supplying any that are lacking if necessary—and next to find the terms, that

<sup>21</sup> As my rendering is more of a paraphrase than a translation, I append the Greek: *ἐκ τίνων μὲν οὖν αἱ ἀποδείξεις γίνονται καὶ πῶς καὶ εἰς ὅποια βλέπτεον καθ' ἕκαστον πρόβλημα, φανερόν ἐκ τῶν εἰρημένων· πῶς δ' ἀνάξομεν τοὺς συλλογισμοὺς εἰς τὰ προειρημένα σχήματα, λεκτέον ἂν εἴη μετὰ ταῦτα· λοιπὸν γὰρ ἔτι τοῦτο τῆς σκέψεως. εἰ γὰρ τήν τε γένεσιν τῶν συλλογισμῶν θεωροῖμεν καὶ τοῦ εὑρίσκειν ἔχομεν δύναμιν, ἔτι δὲ τοὺς γεγενημένους ἀναλούομεν εἰς τὰ προειρημένα σχήματα, τέλος ἂν ἔχοι ἡ ἐξ ἀρχῆς πρόθεσις.* The *πρόθεσις* is very much like that in *Topics*, 101b11-13. We may compare Aristotle's *γεγενημένους* with the *γεγενήσθω* or *γεγονέτω* of analytical proof in mathematics: cf. *Menaechmus ap. Eutoc.*, vol. III, p. 78, 16, Heiberg; *Archimedes*, vol. I, pp. 202, 10; 184, 5; 206, 24, Heiberg.

<sup>22</sup> Cf. D. L. *ap. Rose*, pp. 3-9, lines 34, 46, 47, 67; *Hesychius*, *ib.*, pp. 11-18, lines 34, 38, 44; *Ptolemy*, *ib.*, pp. 19-20, lines 63, 79, 80.

<sup>23</sup> The constant attention paid to *ἐνδοξα* is shown by the frequency of the verb *δοκεῖ*, which introduces them. (Cf. Bonitz, *Index*, 203a27-37.) This would make it probable that Aristotle had collections of these opinions ready to hand. Cf. *Topics*, 105b12, *ἐκλέγειν δὲ χρὴ (sc. τὰς προτάσεις) καὶ ἐκ τῶν γεγραμμένων λόγων, κτλ.*

<sup>24</sup> Jaeger, *Aristotle* (English translation), p. 62: "... and since the words are not a plain citation from the *Euthydemus*, but a compression of Plato's exposition into several fairly long syllogisms. . . ."



which occurs twice being the middle, and the others being easily identifiable from their position in the conclusion.<sup>25</sup>

The analogy of this with mathematical "analysis" is clear: we have the reasoning, especially the conclusion,<sup>26</sup> given: the problem is to find the syllogism which produced it. In this case Aristotle is using *ἀνάλυσις* of passing from the conclusion to the principle from which it is deduced, and thus connecting the conclusion with its source, and not primarily of the process whereby the reasoning is retraced. He is justified in this modification by the meaning of the mathematical term itself, which is literally a "breaking-up." *Ἀνάλυσις* is used, for example, of breaking up figures into their elements in the *De Generatione et Corruptione*.<sup>27</sup> This sense was transferred, by a metaphor common in mathematics,<sup>28</sup> from the figures to the proofs (both are called *διαγράμματα*), and *ἀναλύειν διάγραμμα* might have meant either to break a figure up into its parts or to divide a theorem into its premises or *στοιχεῖα*, starting from the figure or the theorem as a whole.

From the general meaning of reducing reasoning to syllogistic form is derived the common meaning of reducing a syllogism in one figure to a syllogism in another.<sup>29</sup> The procedure is analogous in both cases: in the one we find the syllogism behind a piece of reasoning not expressed syllogistically; in the other we find the syllogisms in other figures behind reasoning expressed in a given figure.

That Aristotle considered the conclusion as a starting point,<sup>30</sup> as appears from his use of *ἀνάλυσις*, is confirmed by his expression for begging the question—*τὸ ἐξ ἀρχῆς* or *ἐν ἀρχῇ αἰτεῖσθαι* or *αἰτεῖν*. Some confusion has been caused in the interpretation of

<sup>25</sup> *An. Pr.*, I, chap. 32.

<sup>26</sup> *Συλλογισμός* frequently occurs in the sense of *συμπέρασμα*: cf. Bonitz, *Index*, 712a9 f.

<sup>27</sup> 329a23; cf. *De Caelo*, 300a11. Cf. Proclus, in *Eucl.*, p. 382, 1-2 *χρὴ τοίνυν εἰδέναι ὅτι πᾶν σχῆμα εὐθάγραμμον εἰς τρίγωνα ἀναλύεται*.

<sup>28</sup> Cf. the use of *διάγραμμα* for theorem. (Cf. Ross on *Ar.*, *Met.* B, 998a25; Plato, *Phaedo*, 73b1; *διαγεγραμμένων An. Pr.* 46a8), *γράφειν* for geometrical proof (*Topics*, 158b30; Plato, *Theaetetus*, 147d) and *ψευδογραφεῖν* for false geometrical reasoning.

<sup>29</sup> *An. Pr.* 50b33, 51a2 f., 18, 22, 26, 32, 34, 38, 40 f., b4. Cf. also *An. Pr.* I, chap. 45.

<sup>30</sup> Cf. H. Maier, *Die Syllogistik des Aristoteles*, II, pp. 157 ff.

Aristotle's doctrine of *petitio principii* by a failure to distinguish between the senses of ἀρχή. In the phrase in question ἀρχή is not used as a "principle of knowledge" or demonstration, but in the literal sense of "beginning." The words τὸ ἐν ἀρχῇ or ἐξ ἀρχῆς mean "that with which we began," that is, the πρόβλημα or question at issue,<sup>31</sup> which is the same as the conclusion, and the whole phrase τὸ ἐξ ἀρχῆς αἰτεῖσθαι means "to postulate or take as premise the question at issue," that is, to use the conclusion as one of the premises from which it is to be deduced. The confusion of the meanings of ἀρχή is perhaps to be seen in the traditional Latin translation, *petitio principii*, and was doubtless furthered by the occurrence of both senses of ἀρχή in Aristotle's discussion of the fallacy in the *Prior Analytics* (64b35).<sup>32</sup> The occurrence of the fuller form τὸ ἐξ ἀρχῆς κείμενον (*Met.* Γ, 1008b1 f.) and τῆς ἐξ ἀρχῆς θέσεως (*Top.* 156a13 cf. 159a8) shows that τὸ ἐξ ἀρχῆς was the θέσις, or problem at issue (cf. *Top.* 104b35), and is decisive in favor of this explanation, as is the fact that λαμβάνειν is often substituted for αἰτεῖσθαι.<sup>33</sup> Λαμβάνειν means "to take as premise" and indicates that the fallacy consists in the identity of the conclusion with a premise. The other interpretation would force one to take λαμβάνειν as referring to the conclusion, besides involving a mistranslation of the common Greek phrase ἐξ ἀρχῆς.<sup>34</sup>

The phrase may well be of mathematical origin. In at least one mathematically colored passage<sup>35</sup> Aristotle refers to the

<sup>31</sup> Cf. Waitz, I, p. 429; Bonitz, *Index*, 111b15 ff. That τὸ ἐξ ἀρχῆς was synonymous with πρόβλημα can be seen from a comparison of *Topics*, 162b34 αἰτεῖσθαι . . . τὸ ἐν ἀρχῇ with 163a9 αἰτεῖται τὸ πρόβλημα (cf. also *An. Pr.* 43a7 and 48b34). Cf. also *Top.* 163a24-27: . . . πρὸς γὰρ ἐκείνο (i. e. τὸ συμπέρασμα) βλέποντες τὸ ἐν ἀρχῇ λέγομεν αἰτεῖσθαι. . . .

<sup>32</sup> For ἀρχαί = premises cf. *An. Pr.* I, 43a21.

<sup>33</sup> Cf. Bonitz, *Index*, 111b10 ff. and especially 21-27.

<sup>34</sup> Cf. Grote, *Aristotle*<sup>3</sup>, p. 176. Besides Grote, Prantl seems to misunderstand the phrase (*Gesch. d. Logik*, I, p. 311): Zunächst kommt hierbei in Betracht die erschlichene Annahme des obersten Ausgangspunktes (τὸ ἐν ἀρχῇ αἰτεῖσθαι), die sogenannte *petitio principii*. . . . Here "Ausgangspunkt" seems to represent ἀρχή as premise; and although the idea read into the passage is correct, it is arrived at by a misinterpretation of the terminology.

<sup>35</sup> *Phys.* 242b20. The theorem to which it refers is on pp. 242a15-242b19 (interrupted by a long parenthetical statement from 242a31-b8), and the enunciation is found p. 242a15-20. Cf. also *Topics*, 163a10-13.

initial statement of what is to be proved, or enunciation, with these words, and similar expressions are also found in late mathematicians.<sup>36</sup> The absence of the phrase in early mathematical writings can to some extent be compensated for by pointing to the mathematical associations of the words αἰτεῖσθαι and λαμβάνειν with which it is usually accompanied. Further, the expression presents a somewhat unphilosophical appearance,<sup>37</sup> as ἀρχή in the theory of demonstration would naturally be in the language of Plato and Aristotle the highest principle, or the premises. That the Academy was careful in its choice of technical terms can be seen from the substitution of θεωρημα for the older διάγραμμα in the sense of theorem,<sup>38</sup> and from the objections to the term γεωμετρία in the *Epinomis*.<sup>39</sup> Again, "begging the question" was an extremely easy mistake to fall into when using the "analytical" method of proof; and that mathematicians had classified the usual errors, and consequently this one, would seem plausible from the fact that Euclid in his *ψευδάρια* discussed the "ways" of committing geometrical paralogisms.<sup>40</sup>

Aristotle uses the word στοιχείον in a mathematical sense, and in a logical or dialectical sense analogous to it.<sup>41</sup> Mathematically, it is an elementary theorem; dialectically, an elementary principle entering into many arguments.

<sup>36</sup> Pappus, *Collectio*, vol. I, p. 246, 18, Hultsch: τούτου γὰρ ὄντος τὸ προκείμενον ἐξ ἀρχῆς δεικνύται . . . ; Eutocius, *Comm. in lib. de sphaera et cylindro* (vol. III of Heiberg's *Archimedes*, p. 147, 7) τὸ ἐξ ἀρχῆς πρόβλημα; cf. Eucl., *Fragm.*, vol. VIII, p. 280, 17, Heiberg.

<sup>37</sup> That it was not coined by Aristotle appears from *Top.* 163a26 f. . . . πρὸς γὰρ ἐκεῖνο (i. e. τὸ συμπέρασμα) βλέποντες τὸ ἐν ἀρχῇ λέγομεν αἰτεῖσθαι, where λέγομεν points to a current usage of the phrase.

<sup>38</sup> Cf. Proclus, in *Eucl.*, p. 77, 16 f., Friedlein: ἤδη δὲ τῶν παλαιῶν οἱ μὲν πάντα θεωρήματα καλεῖν ἤξισαν, ὡς οἱ περὶ Σπεύσιππον καὶ Ἀμφίνομον, ἡγούμενοι ταῖς θεωρητικαῖς ἐπιστήμας οικειότεραν εἶναι τὴν τῶν θεωρημάτων προσήγοριαν ἢ τὴν τῶν προβλημάτων. To be sure, from this notice the term θεωρημα appears as opposed to πρόβλημα, not διάγραμμα, but διάγραμμα disappears from mathematical usage from this time on, being replaced by θεωρημα (clearly connected with the Platonic θεωρεῖν and ἰδεῖν of the Ideas) and πρόβλημα.

<sup>39</sup> 990d2. Cf. Plato, *Rep.* 527a.

<sup>40</sup> Proclus, in *Eucl.*, p. 70, 11, Friedlein (*Eucl.*, *Frag.* 3, Heiberg).

<sup>41</sup> For the dialectical use cf. *Top.* 121b11, 123a27, 128a22, 143a13, 148a22, 151b18; for the mathematical *Met.* B 998a26, *Top.* 158b35, 163b24, Diel's *Elementum*, pp. 26-28.

Proclus, probably on the authority of Eudemus, says that Hippocrates of Chios and Leon wrote *Στοιχεία* or Elements.<sup>42</sup> Diels, I think rightly, argues that these titles cannot be used to date the mathematical use of *στοιχεία*.<sup>43</sup> More valuable is the evidence that Menaechmus, a member of the Academy and a contemporary of Aristotle, knew of the mathematical use of *στοιχείον*.<sup>44</sup>

The natural source of the dialectical use, where the word is equivalent to *τόπος*,<sup>45</sup> would also be the Academy, and as the presence of the word *καλοῦσιν* (1014b2) in the description of the dialectical use in *Metaphysics Δ* would indicate that the use in question was generally current, and therefore not specially Aristotle's own, it may be said that the evidence points to the Academy as the source of both meanings.

Zeuthen<sup>46</sup> connects the mathematical use of *στοιχείον* with the procedure of analysis, by which the parts of a mathematical proof are revealed, each of these parts being an element.<sup>47</sup> As element then is best explained semantically by its connection with analysis, it is reasonable to suppose that the mathematical use is the source of the analogous use in logic. Further, a *τόπος* is a source for arguments, which the disputant obtains (*πορίζεσθαι*) from it. A parallel usage is found in mathematics: just as we obtain (*πορίζεσθαι*) an argument from a dialectical *τόπος* or *στοιχείον*<sup>48</sup> so do we get a *πόρισμα* or corollary from a mathematical *στοιχείον*.

The word *αἰτεῖν* was seen to be connected with the point of view of analysis in the phrase *τὸ ἐξ ἀρχῆς αἰτεῖν*. A consideration of the derivation of *αἴτημα* in the sense of postulate throws some light on the phrase, and an examination of *ἀξίωμα* on the use of *αἴτημα*.

<sup>42</sup> Proclus, *op. cit.*, p. 66 f.

<sup>44</sup> Proclus, *op. cit.*, p. 72, 23 ff.

<sup>43</sup> *Elementum*, p. 27.

<sup>45</sup> Cf. Aristotle, *Rhet.* 1396b22.

<sup>46</sup> *Op. cit.*, p. 225: Den ved Analysen fundne Gruppe af enkelte Sætninger, eller snarere Beviserne for disse, udgør de *Elementer* (*στοιχεία*), hvorefter den forelagte Sætning, eller snarere Beviset for denne, er sammensat, etc. Translation: "The group of simple propositions found by the analysis, or rather the proofs of these, constitutes the elements (*στοιχεία*) of which the proposition under consideration, or rather its proof, is composed."

<sup>47</sup> Cf. *Met.* Δ 1014a35.

<sup>48</sup> Cf. *Top.* 158b6, 22, 164b19, *Rhet.* I, 1356a1, III 1403b13.

Three uses of *ἀξίωμα* and *ἀξιῶ* can be distinguished in Aristotle,<sup>49</sup> the dialectical, the mathematical, and the metaphysical. The mathematical usage, as certain passages indicate,<sup>50</sup> was not original with him, but taken from the mathematicians of his day. In this sense *ἀξιώματα* are the *κοινά* or *κοινὰ ἀρχαί*<sup>51</sup> in mathematics, so called because they are common to the various branches of mathematics, as geometry and arithmetic, and are not confined to a single branch, as Euclid's *αἰτήματα* are to geometry.<sup>52</sup>

Aristotle's use of the term in the metaphysical or epistemological sense is derived from this usage. *Ἀξίωμα* is defined (*An. Pr.* 72a13-18) as: ἦν (sc. ἄμεσον ἀρχὴν συλλογιστικὴν) δ' ἀνάγκη ἔχειν τὸν ὁτιοῦν μαθησόμενον (sc. λέγω) ἀξίωμα· ἔστι γὰρ ἕνα τοιαῦτα· τοῦτο γὰρ μάλιστ' ἐπὶ τοῖς τοιούτοις εἰώθαμεν ὄνομα λέγειν. "I call that immediate syllogistic principle which a man who is to learn anything at all must have (i. e. know previously) an axiom—for there are a few such principles—, that being the term we are most in the habit of using for such things." He has in

<sup>49</sup> A useful discussion of this word is to be found in Maier, *Die Syllogistik des Aristoteles*—hereafter referred to as *Syllogistik*—, II, I, p. 4, n. 2.

<sup>50</sup> *Met.* Γ 1005a20: τὰ ἐν τοῖς μαθήμασι καλούμενα ἀξιώματα. In *Met.* N 1090a36 (cf. 1090a13) *ἀξιώματα* is loosely used for mathematical theorems in general, arithmetical and geometrical. Plato uses *ἀξιῶ* in two passages where he has mathematical principles in mind and may be playing on the word: cf. *Rep.* 510c2-d1: . . . ποιησάμενοι ὑποθέσεις αὐτὰ οὐδένα λόγον . . . ἔτι ἀξιούσι περὶ αὐτῶν διδόναι ὡς παντὶ φανερώων . . . , 526a2 f.: . . . ἐν οἷς τὸ ἐν ὅλον ὑμεῖς ἀξιούτέ ἐστιν.

<sup>51</sup> Cf. *An. Post.* I, chap. 10 and especially 76a41, b20.

<sup>52</sup> For the equation of *ἀξιώματα* and *κοινά* cf. *An. Post.* 76b14: τὰ κοινὰ λεγόμενα ἀξιώματα and H. Maier, *Syllogistik*, II, I, p. 400, n. 1. Heiberg (*Mathematisches zu Aristoteles*, p. 5) defends the authenticity of Euclid's term *κοινὰ ἔννοια* (= axioms) by pointing to Aristotle's use of *κοινά*. The distinction between Euclid's *αἰτήματα* and *κοινὰ ἔννοια* rests on this traditional mathematical distinction of "common" and "peculiar" principles. The *κοινὰ ἔννοια* use the general neuter of the objects to which they apply, while the postulates apply without exception to the peculiar matter of geometry: points, lines, angles, and figures. This circumstance no doubt explains the inclusion of the assumption (*κοινὴ ἔννοια*, 7) that things congruent are equal among the *κοινὰ ἔννοια*, although it is pretty clear that it can only apply to the material of geometry: it does not mention explicitly points, lines, angles, or figures but is expressed with the neuter in the general language of the other axioms.



mind here the law of contradiction (implicitly called ἀξίωμα in Met. Γ, 1005b33), which a man must have who knows anything: (Met. Γ, 1005b15 ff.): ἦν γὰρ (sc. ἀρχὴν) ἀνάγκη ἔχειν τὸν ὁτιοῦν ξυνιέντα τῶν ὄντων, τοῦτο οὐχ ὑπόθεσις. ὃ δὲ γνωρίζειν ἀναγκαῖον τῷ ὁτιοῦν γνωρίζοντι, καὶ ἦκειν ἔχοντα ἀναγκαῖον. With the law of contradiction in ἔστι γὰρ ἓνα τοιαῦτα Aristotle no doubt includes the law of the excluded middle. The analogy of the philosopher and the mathematician is touched upon in Met. Γ, 1004a6;<sup>53</sup> both deal with sciences that have branches arranged in order of priority, and it is very probably in accordance with this analogy that Aristotle applies ἀξίωμα to his laws of contradiction and the excluded middle; for just as the axioms of mathematics apply to all its branches, so these laws apply to all the branches of οὐσία.<sup>54</sup> We may interpret his saying that he chooses the term ἀξίωμα "because it is the term we are most in the habit of applying to such things" as a defense of what is, to a degree, an innovation. Similarly, καλούμενα in τὰ ἐν τοῖς μαθήμασι καλούμενα ἀξιώματα (Met. Γ, 1005a20) points to the fact that these mathematical axioms correspond less to his definition than do the laws of contradiction and the excluded middle, which are axioms in the full and highest sense. Again in the phrase of the *Posterior Analytics* (76b14), τὰ κοινὰ λεγόμενα ἀξιώματα, λεγόμενα no doubt is taken especially with κοινὰ and emphasizes the point made explicit in the context, that these "common axioms" are not common absolutely, but κατ' ἀναλογίαν, that is, when formulated so as to apply only to a particular subject matter, have an analogous relation to these matters, the axiom "when equal numbers are subtracted from equal numbers, the remaining numbers are equal" having a relation to arithmetic analogous to that which the axiom "when equal magnitudes are

<sup>53</sup> Cf. Met. Γ 1004a2-9: καὶ τοσαῦτα μέρη φιλοσοφίας ἐστὶν ὥστε αἱ οὐσὶαι ὥστε ἀναγκαῖον εἶναι τινα πρώτην καὶ ἐχομένην αὐτῶν. ὑπάρχει γὰρ εὐθὺς γέννη ἔχον τὸ ἐν [καὶ τὸ ἐν]. διὸ καὶ αἱ ἐπιστήμαι ἀκολουθοῦσι τούτοις. ἔστι γὰρ ὁ φιλόσοφος ὥστε ὁ μαθηματικὸς λεγόμενος· καὶ γὰρ αὕτη ἔχει μέρη, καὶ πρώτη τις καὶ δευτέρα ἐστὶν ἐπιστήμη καὶ ἄλλαι ἐφεξῆς ἐν τοῖς μαθήμασιν.

<sup>54</sup> Cf. Theophrastus' definition ap. Themistius, *Analyticorum Paraphrasis*, ed. Wallies, p. 7, 3-6: ὁ γὰρ Θεόφραστος οὕτως ὀρίζεται τὸ ἀξίωμα. ἀξίωμα ἐστὶ δόξα τις ἥ μὲν ἐν τοῖς ὁμογενέσιν, ἐὰν ἴσα ἀπὸ ἴσων, ἥ δὲ ἀπλῶς ἐν ἅπασιν, ὅσον τὴν κατάφασιν ἢ τὴν ἀπόφασιν· ταῦτα γὰρ καθάπερ σύμφυτα καὶ κοινὰ πᾶσι.



subtracted from equal magnitudes, the remaining magnitudes are equal" has to geometry.<sup>55</sup>

The third use, which is the source of the preceding two, is the dialectical. 'Αξίωμα is used of a premise<sup>56</sup> and of a demand for assent from the dialectical correspondent and is applied to the *reductio ad absurdum*, where it indicates the demand of the questioner that the respondent shall grant the contradictory of the conclusion he denies.<sup>57</sup>

The source of the dialectical meaning, and through it of the others, is the common Greek use of ἀξιούν in the sense of "deem fitting" or "right" that a thing should be so.<sup>58</sup> The word as

<sup>55</sup> *An. Post.* 76a37-76b1: ἔστι δ' ὧν χρῶνται ἐν ταῖς ἀποδεικτικαῖς ἐπιστήμασι τὰ μὲν ἴδια ἐκάστης ἐπιστήμης τὰ δὲ κοινά, κοινὰ δὲ κατ' ἀναλογίαν, ἐπεὶ χρησιμὸν γε ὅσον ἐν τῷ ὑπὸ τὴν ἐπιστήμην γένει. ἴδια μὲν ὅσον γραμμὴν εἶναι τοιανδί, καὶ τὸ εὐθύ, κοινὰ δὲ ὅσον τὸ ἴσα ἀπὸ ἴσων ἂν ἀφέλῃ, ὅτι ἴσα τὰ λοιπά. ἱκανὸν δ' ἕκαστον τούτων ὅσον ἐν τῷ γένει· ταῦτό γὰρ ποιήσει, κἂν μὴ κατὰ πάντων λάβῃ ἀλλ' ἐπὶ μεγεθῶν μόνον, τῷ δ' ἀριθμητικῷ ἐπ' ἀριθμῶν. "Of the principles used in the demonstrative sciences are (1) those peculiar to each separate science, and (2) those which are common to several—I mean 'common' by analogy, since only that part of them which is in the subject matter of the science is used. Peculiar to a particular science are such principles as 'a line is of such a sort (i. e. the definition of line)' and 'straight (i. e. the definition of straight),' while common to several are 'if equals are subtracted from equals, the remainders are equal.' That portion of these principles which is in the subject matter in question is sufficient for the needs of the science dealing with that subject matter; for its usefulness will be the same if it be formulated to apply not to everything, but to magnitudes alone (as in the case of the geometer) or of numbers alone, in the case of the arithmeticians." Aristotle's purpose in this passage is to show that the mathematician, unlike the philosopher, does not treat the κοινὰ as κοινὰ. Cf. *Met.* I, 1005a25.

<sup>56</sup> Aristotle, *Topics*, *An. Pr.*, and *An. Post.* *passim*, e. g. Cf. H. Maier, *Syllogistik*, II, 1, p. 4, n. 2.

<sup>57</sup> Here ἀξίωμα is nearly equivalent to ἀξίωσις. For examples of this application cf. *An. Pr.* 62a13, 16 f. (ἀξιούν). For other applications of ἀξίω cf. *Top.* 157a37, 157b32, 37.

<sup>58</sup> Cf. the Stoic explanation of their term ἀξίωμα (= judgment) in Diogenes Laertius VII, 65: ὠνόμασται δὲ τὸ ἀξίωμα ἀπὸ τοῦ ἀξιόσθαι ἢ ἀθετεῖσθαι· ὁ γὰρ λέγων ἡμέρα ἐστίν, ἀξιούν δοκεῖ τὸ ἡμέραν εἶναι (here ἀξιούν has acquired the connotation of applying to an affirmative proposition); Ammonius in *An. Pr.* (Wallies), p. 26, 36-27, 2; *Schol. in Euclid*, vol. V, p. 112, 6 (Heib.); *ib.*, p. 113, 19. Themistius gives an erroneous derivation (*An. Post. Paraphr.* [Wallies], p. 7, 6-8 after the definition given *supra*, p. 44, n. 54): ὁ γὰρ ἀπλῶς καὶ ἐπὶ πάντων ἡ ὁλως

used in dialectics could then be interpreted as "a deeming proper" by one of the parties that a subject should have a certain predicate, or that a certain proposition should be true, or finally, that the other party should grant a proposed statement. The latter interpretation is the most probable, and the word used in this connection is the source of the dialectical sense, as certain dialectical passages in Plato show.<sup>59</sup>

In dialectics ἀξιῶ is used only of the premises, the conclusion being proved, and not asked as a concession from the respondent.<sup>60</sup> In the mathematical application, then, ἀξίωμα would likewise have reference to the premises. But all the premises of a given theorem are the conclusions of previous theorems, and therefore proved, with the exception of the first principles, which are the premises *par excellence*, as they are not also conclusions, and thus the word would naturally come to apply to the first principles *par excellence*. Of these, some were definitions, some αἰτήματα, and ἀξιώματα would again designate especially those principles for which it was the only name, and thus acquire, from the dialectical usage, the mathematical sense of "axiom."

Although the evidence is slight, the following arguments tend to show that αἴτημα and αἰτῶ, as used in Aristotle's logic, are of mathematical origin.

Αἰτῶ is often associated with δίδωμι,<sup>61</sup> and the use of δίδωμι in

ἐπὶ τῶν ὁμογενῶν τίθεται, ταὐτὸν ἀξιοῦμεν καὶ ἐπὶ τῶνδε. Aristotle, *Ethica Eudemia* A, 1218a28-30: δεῖ δὲ . . . μὴ ἀξιοῦν μηθὲν ἀλόγως, ἀ καὶ μετὰ λόγου πιστεῦσαι οὐ ῥᾶδιον (where ἀξιοῦν implies that there is no argument presented). Cf. *Phys.* 252a24.

<sup>59</sup> Cf. Plato, *Meno* 93a2, where Anytus (the respondent) says: καὶ τούτους (i. e. τοὺς καλοὺς κάγαθοὺς) ἀξιῶ παρὰ τῶν προτέρων μαθεῖν. . . . E. S. Thompson in his note on this passage cites as examples of ἀξιῶ with a proposition as object *Gorg.* 450c1, *Phaedo* 86d, *Apol.* 18d, *Rep.* 610a, *Polit.* 262e. He translates ἀξιῶ as "I expect you to grant" and compares the "mainly transatlantic" use of "I claim."

<sup>60</sup> So the ἀξίωμα of the *reductio ad absurdum* is not proved—as it might have been with the help of the law of contradiction and the excluded middle—but asked as an ἐνδοξον. It would have taken the dialectician too far afield to have brought in the law: how far can be judged from the analysis of the *reductio ad absurdum* given in Maier, *Syllogistik*, II, 2, pp. 125 f.

<sup>61</sup> Cf. Hdt., IX, 109: δώσεις μοι τὸ ἄν σε αἰτήσω; I, 90: αἰτέο δόσιν ἦντινα βούλεαι τοι γενέσθαι; VIII, 112: εἰ μὴ δώσουσι τὸ αἰτεῖμενον; Xen., *Cyr.*, V,

mathematics is well established.<sup>62</sup> Further, αἰτῶ and αἰτοῦμαι are with few exceptions in Aristotle confined to the expression τὸ ἐξ ἀρχῆς αἰτεῖν.<sup>63</sup>

The procedure indicated by this phrase is applicable to mathematics, and in his discussion of it Aristotle uses mathematical illustrations.<sup>64</sup> The practical restriction of the word to this expression would indicate that it was traditional; and the only source for which there is any evidence is mathematics.<sup>65</sup> Again, Euclid's sense of αἴτημα is not Aristotle's, an indication that there was an independent mathematical tradition for the word. In Euclid the κοινὰ ἔννοιαι are principles common to arithmetic as well as geometry, and are synonymous with ἀξίωμα as used by the mathematicians of Aristotle's time,<sup>66</sup> while the αἰτήματα deal with points, lines, and angles, the peculiar province of geometry. The distinction between the κοινὰ ἔννοιαι and αἰτήματα of Euclid is then the same as Aristotle's distinction between κοιναί and ἴδια ἀρχαί.<sup>67</sup> As Aristotle's definition of αἴτημα does not agree

5, 21: ἤτησά σε δοῦναί μοι; *Hell*, V, 4, 11: ἔδοσαν ἃ ἤτουν; *Cyr.*, VIII, 7, 3: αἰτοῦμαι δ' ὑμᾶς δοῦναι; *Hipp.*, 1, 1: χρὴ αἰτεῖσθαι θεοὺς . . . διδόναι . . . ; *Symp.*, 4, 47: αἰτοῦνται τοὺς θεοὺς . . . τὰγαθὰ . . . διδόναι; cf. *ib.*, 8, 15: *Anab.*, II, 3, 18: αἰτήσασθαι δοῦναί μοι ἀποσῶσαι ὑμᾶς εἰς τὴν Ἑλλάδα. Plato, *Theat.*, 146d3: ἐν αἰτηθεῖς πολλὰ δίδως.

<sup>62</sup> Cf. Sir T. L. Heath, *op. cit.*, I<sup>2</sup>, pp. 132 f.

<sup>63</sup> For τὸ ἐξ ἀρχῆς αἰτεῖν cf. pp. 40-41 *supra*. Τάναντία αἰτεῖν occurs in *Top.* 163a14-28 but is replaced by πάντικείμενα λαμβάνειν in *An. Pr.*, II, chap. 15. Αἰτοῦμαι occurs independently of these phrases in *An. Post.* 73a13, *Top.* 162a27 and 31. The use of αἴτημα has been generalized, however, and the word is currently used as a synonym of πρότασις or premise, together with διάστημα, ὑπόθεσις, ἀρχή, λήμμα, ἐρώτημα and ἀξίωμα: cf. H. Maier, *op. cit.*, II, 1, p. 4, n. 2.

<sup>64</sup> Cf. *An. Pr.* 65a4-9, *Top.* 163a11-13.

<sup>65</sup> The evidence is the use of αἴτημα and ἤτήσθω in Euclid, *Elem.*, Postulata I (vol. I, p. 8, 6 and 7, Heiberg).

<sup>66</sup> Cf. p. 43 *supra*.

<sup>67</sup> The seventh Common Notion (Euclid [ed. Heiberg], vol. I, p. 10, 10) καὶ τὰ ἐφαρμόζοντα ἐπ' ἄλληλα ἴσα ἀλλήλοις ἐστὶ would seem to be peculiar to geometry. It was probably included among the common notions because it contains no explicit mention of the subject matter peculiar to geometry: points, lines, and angles. It will be noticed that every postulate contains a mention of these, while every common notion (with the exception of the ninth, an interpolation) is expressed by means of the general neuter, as τὰ ἴσα, τὰ ἡμίση, τὰ ἐφαρμόζοντα.

with the Euclidean usage, it is probable that Aristotle took the term from mathematics, and not the mathematicians from him, especially as ἀξίωμα, the correlative of αἴτημα, is certainly a mathematical borrowing. We may suppose then that the mathematicians contemporaneous with Aristotle used ἀξίωμα and αἴτημα for κοιναί and ἴδια ἀρχαί, and that when Aristotle took ἀξίωμα in the sense of a principle a pupil had to accept to know or learn anything, he also took its correlative αἴτημα in the corresponding sense of a principle that a pupil did not, or even refused to, accept,<sup>68</sup> and was perhaps confirmed in his choice by the current usage of the language, in which ἀξιῶ implies that a request is thought fair and reasonable, while αἰτῶ lacks such implication.

The origin of αἴτημα is to be sought in its connection with δίδωμι: it is a request for the granting of certain data for use in demonstration. Actually the first three αἰτήματα in Euclid postulate the possibility of certain constructions—of the connecting of two points by a straight line, of the production of a finite straight line continuously in a straight line, and of the construction of a circle with any point as center and any radius. In the theorems of the *Elements* these postulates are referred to in sentences where the infinitive of the verb of the postulate becomes a passive imperative. Thus the second postulate runs: (ἡτήσθω) καὶ πεπερασμένην εὐθείαν κατὰ τὸ συνεχὲς ἐπ' εὐθείας ἐκβαλεῖν. In the *Elements*<sup>69</sup> we find such phrases as ἐκβεβλήσθω ἡ AB (εὐθεΐα). Similarly the Greek of the third postulate is (ἡτήσθω) καὶ παντὶ κέντρῳ καὶ διαστήματι κύκλον γράφεσθαι. In the *Elements* the phrase is κέντρῳ μὲν τῷ A, διαστήματι δὲ τῷ AB κύκλος γεγράφθω ὁ BΓΔ.<sup>70</sup> The verb ἀγαγεῖν of the first postulate, however, is uniformly represented by ἐπεζεύχθω, but the two words are nearly synonymous,<sup>71</sup> and the slight variation need cause no difficulty.

<sup>68</sup> *An. Post.* 76b30 f.

<sup>69</sup> Eucl., *Elem.*, I, 12, 26 ἐκβεβλήσθωσαν ἐπ' εὐθείας ταῖς ΔΑ, ΔΒ εὐθεΐαι αὐτῶν ΑΕ, ΒΖ. Cf. I, 20, 7, I, 42, 9, I, 44, 14 (Heiberg).

<sup>70</sup> Eucl., *Elem.*, I, 10, 19; 14, 1; 14, 23.

<sup>71</sup> The postulate is formulated as follows: ἡτήσθω ἀπὸ παντὸς σημείου ἐπὶ πᾶν σημεῖον εὐθεΐαν γραμμὴν ἀγαγεῖν, while in the *Elements* the procedure is expressed by such phrases as ἐπεζεύχθω ἀπὸ τοῦ Α σημείου ἐπὶ τὸ Β σημεῖον εὐθεΐα ἡ ΑΒ (cf. *Elem.* vol. I, 12, 24; 12, 3; 20, 13; 24, 24 [Heiberg]). Ἡχθῶ, which we should have expected, is used chiefly of drawing a line parallel (*Elem.* vol. I, 88, 20; 90, 17; 102, 19) or perpendicular (vol. I, 36, 10; IV, 24, 17; 32, 4 and 10) to another,

All three postulates then can be said to point to an origin of *αἴτημα* in the use of the imperative in mathematics.<sup>72</sup>

An obvious objection to this explanation is that the fourth and fifth postulates are of a different kind, as was noticed by Geminus.<sup>73</sup> The fourth postulates that all right angles are equal; the fifth that two straight lines extending outward on the same side of a straight line, and forming interior angles with it of less than two right angles, will meet on that side. Clearly, if two right angles are unequal, the sum of two right angles is not a constant, and it would follow that the postulate would not always be true. The fourth postulate is thus bound up with the fifth, and like the latter, is perhaps a post-Aristotelian addition.<sup>74</sup> However that may be, the fourth and fifth are different enough in kind from the other three to justify the supposition that they are later additions to the tradition, perhaps dating from the time of Aristotle, and need not therefore stand in the way of interpreting *αἴτημα* as originally indicating constructions, or hypotheses expressed with the imperative, such as *γεγράφθω*, *ἔστω*, or *κείσθω*, a meaning which the word has lost in both Aristotle and Euclid through its opposition to *ἀξίωμα*.

The same use of *αἴτημα* is seen in *τὸ ἐξ ἀρχῆς αἰτεῖν*, if a mathematical origin is accepted. In the "problems" in Euclid the infinitive is always used—as e. g. *συστήσασθαι*, *ἀγαγεῖν*—depending on *δεῖ* understood.<sup>75</sup> The "begging" of the *ἐξ ἀρχῆς* is then

that is, in such a way that it is not primarily drawn to connect two given points, but for some other purpose (cf. *Elem.*, vol. I, 146, 27; Aristotle, *Meteor.* 363b6). Perhaps *ἀγαγεῖν* was the older and more general expression (cf. Aristotle, *Top.* 101a16)—though the same distinction between *ἦχθω* and *ἐπεξεύχθω* is observed by Aristotle (cf. for *ἐπεξεύχθω Meteor.* 373a10, 376a17, with 375b23, 376b23; for *ἦχθω Meteor.* 373a11, 363b6)—or perhaps expressions such as *ἡτήσθω ἀπὸ παντὸς σημείου ἐπὶ πᾶν σημείον ἐπιεὺγνυσθαι* (cf. *γράφεσθαι* in postulate 3) or *ἐπιεὺξαι* (cf. *ἐκβαλεῖν* in postulate 2) were avoided because it is really the two points that are "joined," and not the straight line, which is properly the result of the joining.

<sup>72</sup> For *αἰτῶ* connected with an imperative cf. Xen., *Cyr.*, VIII, 7, 26: *αἰτοῦμαι . . . μηδεὶς ἰδέτω*; Plato, *Theaet.* 146d3: *ἐν αἰτηθεῖς πολλὰ δίδως* (referring to *εἰπέ*, c3); Aristophanes, *Vespae*, 556 and *Acharn.*, 476.

<sup>73</sup> Proclus, in *Eucl.*, pp. 184, 6; 188, 5; 192, 5; cf. 182, 1-6 (Friedlein).

<sup>74</sup> T. L. Heath, *The Thirteen Books of Euclid*, I<sup>2</sup>, p. 102.

<sup>75</sup> Cf. Euclid, *Elem.* i 1, 3; 9, 12 etc.



originally the assumption (by use of the appropriate verb in the imperative) of the actual construction the problem is to establish, or of a construction only possible if the former is valid. The use in the general sense of begging the question of a phrase indicating construction is no doubt due to the familiar transference of the language of construction to actual demonstration.<sup>76</sup>

Λαμβάνω occurs in the arguments of Plato in a variety of applications, meaning to take a consideration in hand, instead of dismissing it,<sup>77</sup> to lay hold of a property of a subject of investigation or problem, by enquiry, or discover its formulation,<sup>78</sup> to acquire a piece of knowledge or opinion concerning a thing, or simply acquire knowledge,<sup>79</sup> and to find and formulate a thing and bring it into the discussion.<sup>80</sup> All these senses rest on the comparison of a mental process to a "taking" or "grasping."

That Aristotle had a mathematical meaning in mind in using λαμβάνω of premises is clear from his frequent use of εἰλήφθω<sup>81</sup>—this form being extremely common in mathematics—<sup>82</sup> and consequent use of the perfects εἰληπται<sup>83</sup> and εἰλημμένα. In Euclid

<sup>76</sup> Cf. n. 28 *supra* and Plato, *Rep.* 427a.

<sup>77</sup> Plato, *Polit.* 282a6 . . . συγκριτικῆς . . . μόριον λάβωμεν, . . . ὅσα δὲ τῆς διακριτικῆς ἦν αὐτόθι, μεθώμεν σύμπαντα.

<sup>78</sup> Plato, *Phaedrus* 263b6 οὐκοῦν τὸν μέλλοντα τέχνην ῥητορικὴν μετιέναι πρῶτον μὲν δεῖ ταῦτα ὁδῶ διηρῆσθαι, καὶ εἰληφέναι τινὰ χαρακτῆρα τοῦ εἶδους, ἐν ᾧ τε ἀνάγκη τὸ πλῆθος πλανᾶσθαι καὶ ἐν ᾧ μή. Plato, *Theaet.* 208d6 . . . ὡς ἄρα τὴν διαφορὰν ἐκάστων ἂν λαμβάνησιν ἢ τῶν ἄλλων διαφέρει, λόγον . . . λήψῃ. . . . Plato, *Polit.* 297d3 τοιόνδε τι δεῖ γε ζητεῖν, οὐ πᾶν σύνηθες οὐδὲ βῆδιν ἰδεῖν· ὅμως μὴν πειρώμεθα λαβεῖν αὐτό. Plato, *Phaedrus* 246d . . . τὴν δὲ αἰτίαν . . . λάβωμεν. Plato, *Polit.* 308b f., *Phaedrus* 265c.

<sup>79</sup> Plato, *Soph.* 238b7 . . . ἢ καὶ τῇ διανοίᾳ τὸ παράπαν λάβοι τὰ μὴ ὄντα . . . χωρὶς ἀριθμοῦ; Plato, *Philebus* 34d πρότερον ἔτι φαίνεται ληπτέον ἐπιθυμίαν εἶναι τί πότε ἔστι καὶ ποῦ γίγνεται. Plato, *Polit.* 297b8 τὴν τοιαύτην λαβὸν ἐπιστήμην. *Ib.*, 300e5 and 8 λαβεῖν τέχνην (cf. *ib.*, 302ab ἄγνοιαν εἰληφότων . . . ἐπιστήμην εἰληφέναι).

<sup>80</sup> Plato, *Soph.* 233d3 λάβωμεν τοίνυν σαφέστερόν τι παράδειγμα περὶ τούτων.

<sup>81</sup> *An. Pr.* 26b8, 33a40, 35a16, 37b24, 26b12, and *passim*.

<sup>82</sup> Euclid, *Elem.*, I, 34, 10; 168, 25; 172, 15; 186, 3; 194, 5; 200, 1; 202, 10; 184, 10; II, 12, 10; 128, 7; 194, 20 etc. (Heiberg). Cf. Aristotle, *Physics* 233a35, 235a18 f., 238a6, 242b10, where εἰλήφθω occurs in theorems.

<sup>83</sup> Cf. *An. Pr.* 47b9, 47a18 (εἰληπται) with Euclid, *Elem.*, I, 200, 16; II, 180, 13.



two senses of εἰλήφθω can be distinguished; that of choosing an arbitrary figure or element of a figure, or number, and that of obtaining a figure or element or number by processes already established, the principal examples being, for the first sense, the choosing of a point, for the second, the taking of the center of a circle.<sup>84</sup> Of these senses neither is parallel to Aristotle's sense of taking a premise of a certain quality or quantity, though the first is nearer it than the second.<sup>85</sup> The identity of form, however, shows that he took the mathematical and logical senses of the word to be similar.

The source of the technical use of λαμβάνω for the "taking" of a premise is, however, not to be sought in mathematics, as the development of the usage of the word in this direction can be traced in Plato.

The meaning "grasp" allows as object a proposition, as often in Plato,<sup>86</sup> and thus the mathematical use of the word for "assumption" <sup>87</sup> and "lemma" <sup>88</sup> and the logical use for "take as premise" are made possible.

<sup>84</sup> For the choosing of a point cf. Euclid, *Elem.*, I, 34, 10; 56, 7; 76, 1; 178, 25; 184, 10; 190, 12; 200, 16 etc. (Heiberg); for the taking of the center cf. I, 168, 25; 172, 3; 174, 15; 186, 3; 194, 25; 200, 1; 202, 10 etc. This use occurs only after the method for finding the center has been proved (I, 166, 14 ff., bk. III, 1). In the fifth book the taking of any equal multiples whatever (cf. Heath, *op. cit.*, II<sup>2</sup>, pp. 143 f.) is, like the choosing a point, arbitrary (examples: II, 12, 2 and 10; 14, 22; 22, 14; 180, 13), while the taking of a third proportional (II, 128, 7) or of the greatest common measure (II, 194, 20; 196, 19) or of the smallest numbers in a given ratio (II, 258, 16) are all like the taking of the center of a circle in that they proceed after a method that has been previously demonstrated as valid.

The word λαμβάνω in these senses was no doubt originally opposed to δίδωμι. In the one case the number or point was primitively thought of as given or assigned by the interlocutor, in the other as either acquired by a legitimate procedure or taken arbitrarily by the demonstrator.

<sup>85</sup> Not all the cases of εἰλήφθω refer to the taking of a premise. Some refer to terms: cf. *An. Pr.* 26b8, 12 and *passim*. Here there is a great similarity with the "taking" of arbitrary points.

<sup>86</sup> *Theaet.* 145e οὐ δύναμαι λαβεῖν ἱκανῶς παρ' ἐμαντῶ, ἐπιστήμη δτι ποτὲ τυγχάνει δν. *Ib.*, 200d2, *Phil.* 34d . . . πρότερον ἔτι φαίνεται ληπτέον ἐπιθυμίαν εἶναι τί πότ' ἔστι καὶ ποῦ γίγνεται.

<sup>87</sup> As in Archimedes vol. II, 12, 6 f.; 262, 18 f.; 262, 8 and 22 (Heiberg).

<sup>88</sup> These two meanings are to be carefully distinguished: cf. Sir T. L. Heath, *The Thirteen Books of Euclid*, I<sup>2</sup>, p. 133, n. 2.

Aristotle and Plato use λαμβάνω for the gaining and formulating of a point by investigation.<sup>89</sup> In the game of question and answer, which is by its syllogistic procedure akin to philosophical or scientific enquiry, the "gains" or "acquisitions" are the propositions admitted by the respondent, in other words the premises,<sup>90</sup> and it was natural that as λαμβάνω is used of the philosophical and scientific procedure, it should also be applied to the point gained in the dialectical game. In this acceptation λαμβάνω became tinged with the connotation of "taking" or "receiving" a proposition from the respondent, and a λῆμμα or "acquisition" was a proposition so taken, that is, a premise. Λαμβάνω thus arrived at its technical sense of "take as premise."<sup>91</sup>

Why then are not λαμβάνω and λῆμμα used technically of the conclusion? For the conclusion is as much of an acquisition as the premises. The reason is that in both the Aristotelian and Platonic passages for the non-dialectical meaning, the expressions ληπτέον and δεῖ λαμβάνειν with a proposition as object-clause are used of a point that must be elucidated before the investigation in hand can proceed.<sup>92</sup> Λαμβάνω, then, is here associated not with the simple gaining or acquisition or formulation of a point, but rather with the formulation of a point

<sup>89</sup> For Plato cf. n. 78 *supra*; for Aristotle cf. *De Anima* 415a14 f.: ἀναγκαῖον δὲ τὸν μέλλοντα περὶ τούτων σκέψιν ποιῆσθαι λαβεῖν ἕκαστον αὐτῶν τί ἐστίν, εἴθ' οὕτως περὶ . . . τῶν ἄλλων ἐπιζητεῖν; 403a5; *Phys.* 213b30, 219a2; *Meteor.* 371b1.

<sup>90</sup> For the reason why λαμβάνω is not technically used of the conclusion cf. *infra*, and p. 46.

<sup>91</sup> For the connotation of taking from the respondent, cf. *An. Post.* 71a7 ἀμφοτέροι γὰρ (sc. οἱ λόγοι οἱ τε διὰ συλλογισμῶν καὶ οἱ περὶ ἐπαγωγῆς) διὰ προγινωσκομένων ποιοῦνται τὴν διδασκαλίαν, οἱ μὲν λαμβάνοντες ὡς παρὰ ξυνιέντων, οἱ δὲ δεικνύντες τὸ καθόλου διὰ τὸ δηλὸν εἶναι τὸ καθ' ἕκαστον. *Top.* 154a25: λαβεῖν παρὰ τῶν ἐρωτωμένων τὰς τοιαύτας προτάσεις. . . . That this connotation is merely adventitious appears from *An. Pr.* 24a24: οὗ γὰρ ἐρωτᾷ ἀλλὰ λαμβάνει ὁ ἀποδεικνύων.

<sup>92</sup> Cf. Plato, *Phaedrus* 263b: οὐκοῦν τὸν μέλλοντα τέχνην ῥητορικὴν μετιέναι πρῶτον μὲν δεῖ ταῦτα ὁδῶ διηρῆσθαι, καὶ εἰληφέναι τινὰ χαρακτηριστὴρα ἑκατέρου τοῦ εἶδους . . . ; *Philebus* 34d, 61a4: τὸ τοίνυν τοιοῦτον ἀγαθὸν ἢ τοι σαφῶς ἢ καὶ τινα τύπον αὐτοῦ ληπτέον, ἢν', ὅπερ ἐλέγομεν, δευτερεῖα ὅτῳ δώσομεν ἔχωμεν; Aristotle, *De Part. Animal.* 661b28: καθόλου δὲ χρεῶν τι λαβεῖν, ὃ καὶ ἐπὶ τούτων καὶ ἐπὶ πολλῶν τῶν ὕστερον λεχθησομένων ἔσται χρήσιμον and the passages adduced in n. 89 *supra*.

that is to be used for illuminating a given question. To discuss anything we must rely on certain knowledge previously acquired or possessed; and with the subject of discussion in mind, we can often determine what that knowledge must be. There is a hypothetical necessity then to such knowledge, which is expressed by the forms *ληπτέον* and *δεῖ λαμβάνειν*. This intermediary knowledge is often in the form of conclusions of syllogisms, and thus has the same form as the final proof we are seeking; but there is a profound difference in the attitude with which it is regarded by the demonstrator: it is a means, not an end, and must be got before he can prove his point.

In this way, perhaps, *λαμβάνω* and *λήμμα* as used of apodeictic premises can best be explained; for in the syllogism, the knowledge used in proving the conclusion is contained in the premises.<sup>93</sup>

The use of *λήμμα* in mathematics can be similarly explained: it is used of a theorem that must be known before the theorem in hand can be proved, which, unlike the theorems which precede it, either is of little interest, or breaks the continuity of the work: in other words, it is a theorem whose purpose is merely to provide a premise for use in another demonstration. If *λαμβάνω* started from the meaning of "taking" a proposition from the respondent for use in a proof, or meant acquisition of a point, with no further connotation, it would be equally applicable to all premises, that is, to all the preceding theorems: as it is, its peculiar implication of hypothetical necessity for the investigation in hand renders it eminently suitable as a designation for lemma.

Besides this application to premises and lemmas, is found another use for unproved assumptions in general.<sup>94</sup> Here the whole body of proof is contrasted with the *λαμβανόμενα*, and not,

<sup>93</sup> The language of the *Epinomis* approaches very closely to that of Aristotle, although a conscious use of the syllogism cannot be shown. Cf. 980e3: *λάβωμεν δὴ τοῦτό γε, ὡς ψυχὴ πρεσβύτερόν ἐστι σώματος*. The language of this whole passage is that of proof: cf. *ἀρχήν* (981a3), *θῶμεν* (a2), *ὑπηργμένον* (a2), and *ἐπιβαίνειν* (a4), which appears to be an echo of the *ἐπίβασις* of the *Republic* (511b) and refers to the hypotheses made. *Λαμβάνω* is used for "assume" also in 982e1, 987d9.

<sup>94</sup> Cf. Archimedes I, 4, 22 Heib.: *γράφονται πρῶτον τὰ τε ἀξιώματα καὶ τὰ λαμβανόμενα εἰς τὰς ἀποδείξεις αὐτῶν* (i. e. *τῶν θεωρημάτων* cf. p. 2, 7); Aristotle, *An. Post.* 76b3, 6, 7, 27.

as in the case of *λήμμα*, only the theorem to which the lemma is attached.

The explanation given above connects the term closely with the analytical procedure; for having the conclusion in mind, we determine what premises are necessary for its establishment. Whether the term was actually taken from mathematical analysis must remain doubtful, in the present lack of evidence, though highly probable. If the connection with analysis is accepted, the term belongs to the group comprising *ἀνάλυσις*, τὸ ἐξ ἀρχῆς αἰτεῖν, στοιχείον, and ὁ ἔδει δείξαι.

The phrase ὅπερ ἔδει δείξαι, all but universal in Euclid's *Elements*, occurs in Aristotle in the form ὁ ἔδει δείξαι or συλλογίσασθαι to indicate the question at issue.<sup>95</sup> Even if Heiberg<sup>96</sup> is right in suggesting that Euclid was the first to introduce the phrase, its occurrence in Aristotle would show that orally, at least, the phrase was older. It obviously depends on the analytic point of view.

Δίδωμι is a natural correlative of λαμβάνω, and it is natural to suppose that it too was derived from mathematics.<sup>97</sup> But the dialectical use appears in Plato (*Theaet.* 166b6, *Phaedo* 88a2 and 8,100b7,c1) and is so natural in the sense of "I grant you"<sup>98</sup> in Greek that there is no need to look to mathematics for its origin, especially as the mathematical use had become specialized.<sup>99</sup>

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(PART II TO FOLLOW.)

<sup>95</sup> *An. Pr.* 46b19, 46a33 (ὁ ἔδει δείξαι); 46b12, 32 (ὁ ἔδει συλλογίσασθαι). Compare also 46a33, 46b21, 57b21 and 25, 66a38, *An. Post.* 84b31, 86a19, 85a7, 87a7, *Top.* 162b35, 163a4, 7.

<sup>96</sup> *Litterargeschichtliche Studien über Euklid*, p. 36.

<sup>97</sup> For Aristotle's use of δίδωμι in dialectics cf. Bonitz, *Index*, 194a30-35.

<sup>98</sup> Cf. *Lysias*, IV, 5 ἀλλ' ἦν, εἰ βούλεται, ἐχθρός· δίδωμι γὰρ αὐτῷ τοῦτο· οὐδὲν γὰρ διαφέρει.

<sup>99</sup> For the term δεδομένον cf. Heath, *op. cit.*, I<sup>2</sup>, p. 132. Of the definitions given in Marinus' commentary on the *Data* (vol. VI, pp. 234-256 of Heiberg-Menge's edition of Euclid) one probably gives the original meaning (p. 236, 1-3): καὶ τὸ ἐν ὑποθέσει δὲ παρὰ τοῦ προβάλλοντος ἐκτιθέμενον δεδομένον εἶναι τινες ὑπειλήφασιν.

## NOTES ON MILESIAN INSCRIPTIONS.

### I.

Wiegand, *Abh. Akad. Berlin*, 1911, *Anh.* i, p. 50 = Haussoullier, *Rev. Phil.*, XLV (1921), pp. 51, 56; found at Didyma in 1910; date, 54/3 B. C. The following is Haussoullier's text (p. 56):

- [Ἐ]πὶ στεφανηφόρ[ου Μολπαγόρου]  
 τοῦ Δοκίμου, προ[φητεύοντος δὲ]  
 Σωπόλιος τοῦ Μό[σχου, ὁ χρήσ]  
 τῆς καὶ ὑδροφόρος [Μόσχος Σω]  
 5 πόλιος καὶ ὁ ὑποχρήσ[τῆς Φιλο]  
 ποίμην Ἀνδρονίκου καὶ οἱ[ι γραμμα]  
 τεῖς καὶ οἱ νεωκόροι καὶ οἱ κ[ατοι]  
 κοῦντες ἐν τῷ ἱερῷ καὶ οἱ [πρ]ό[σ]  
 [χω]ροι ἐστεφάνωσαν καὶ ἔτε[ιμην]  
 10 σαν εἰκόνι γραπτῇ ἐπιχρύσωι [Μου]  
 σαῖον Διογνήτου ταμιεύσαντ[α]  
 εὐσεβῶς καὶ ἄρξαντα ἴσως καὶ [δι]  
 καίως· ----- κτλ. -----

The remaining lines do not concern us here. Haussoullier made the restorations [Μολπαγόρου] (1), [δὲ] (2), Μό[σχου ὁ --] (3), [Μόσχος] (4), [Μου]σαῖον (10); and he emended the lapidary's repetition νεοκόροι to [πρ]ό[σχω]ροι (8 f.). But the restoration [χρήσ]τῆς (3) was made by Hiller and adopted by Wiegand.

These restorations are certain with the exceptions of [χρήσ]τῆς (3) and [Μόσχος] (4), which are to my mind very questionable. The former was apparently suggested by the title ὑποχρήστῆς in line 5; furthermore, as Wiegand points out (*op. cit.*, p. 51), Hesychius (*s. v.*) defines χρήστῆς as ὁ μάντις. Haussoullier proposed Μόσχος in line 4 on the basis of the inscription published in *Rev. Phil.*, XLV (1921), p. 53. He assumed that χρήστῆς καὶ ὑδροφόρος was the title of one man, Moschus son of Sopolis (see also Haussoullier, *Rev. Phil.*, XLIV [1920], p. 270).

Now ὑδροφόρος is a title found many times in other inscriptions of Didyma, and in them is always the title of the priestess of Artemis Pythia. That it is no different here, so that the name of a woman, daughter of Sopolis, is missing in line 4, is clear, I think, from a very similar inscription set up just thirteen years later (41/0 B. C.): *C. I. G.*, 2879 = *Rev. Phil.*, XXVI (1902), p. 132:

[Ε]ὐκλήν [Εὐ]ά[νδ]ρου ταμι[εύ]σαν[τα]  
 ἐπὶ στεφανηφόρου Ἀντιόχου Α[ίσ]χιν[ου]  
 καὶ παρεδρεύσαντα τὴν πρώτην ἐξά[μη]  
 νον ὁ προφήτης Μοσχίων Ἐφαιστιώνω[s]  
 5 καὶ ἡ ὑδροφόρος Τρυφῶσα Ἀπολλωνίου καὶ [οἱ]  
 περὶ τὸ μαντεῖον πάντες καὶ οἱ τὸ ἱερὸν κ[ατοι]  
 κοῦντες καὶ οἱ πρόσχωροι ἐστεφάνωσ[αν]  
 καὶ ἐτείμησαν εἰκόνι γραπτῇ ἐπιχρῦσ[ωι]  
 δικαιοσύνης ἔνεκεν καὶ εὐσεβείας.

In both inscriptions the officials and populace of Didyma unite to honor a worthy treasurer, distinguished for righteousness and piety, with a crown and with a gilded and painted portrait.

Moreover, comparison of the two inscriptions indicates that in the one before us we should read [ὁ προφή]της instead of [ὁ χρήσ]της, a title not found in the inscriptions of Didyma so far published. The presence of an ὑποχρήστης does not necessarily imply the presence of a χρήστης; for the title may have been used instead of ὑποπροφήτης. In any case χρήστης should not be restored here.

Therefore I suggest that the first four lines should read:

[Ἐ]πὶ στεφανηφόρ[ου Μολπαγόρου]  
 τοῦ Δοκίμου, προ[φητεύοντος δέ]  
 Σωπόλιος τοῦ Μό[σχου ὁ προφή]  
 τής καὶ <ἡ> ὑδροφόρος [<ἡ δεῖνα> Σω]  
 πόλιος ----- κτλ. -----

Since the prophet's name appeared in the date-formula of the inscription, it was not necessary to repeat it after ὁ προφήτης. The omission of the article before ὑδροφόρος was an error of the lapidary; we have already noticed his carelessness in mentioning the νεωκόροι twice.

So, in the same year that Sopolis was prophet, his daughter was hydrophor of Artemis Pythia. This was not unusual, as is shown e. g., by *Anc. Gr. Ins. Br. Mus.*, 921a.

## II.

*Anc. Gr. Ins. Br. Mus.*, 922; found at Didyma in 1857/8 by C. T. Newton; date, ca. 50 A. D. The first four lines are badly mutilated. Lines 2-4 in the published text show:



. . . ΟΦΗΤΗΣΛΕΥΚΙΟ ---  
 . . ΙΟΞΛ . ΥΚΙΟΥ . . ΕΙ ---  
 . . ΝΑΚΓΞΦΟΞΠΑ . . Γ ΥΙ ---

The block is two feet wide. Many of the letters are not nearly so clear as represented here. The best reading that Hirschfeld could make from this was:

[Πρ]οφήτης Λεύκι[ς. .]  
 ιος Λευκίου . . ε ----  
 ν[α]κ.σφος πα[νη]γυ[ρικός?]

Later Haussoullier (*Rev. Phil.*, XXIII [1899], p. 319) suggested αὐτοῆτης αὐτεπάγγελτος to fill the space between Λευκίου and πανηγυρικός.

But a better restoration is revealed by the text of *C. I. G.*, 2885: Ὑδροφόρος Ἀρτέμιδος Πυθίης Μαλία Ῥουφείνα πατὴρ Λευκίου Μαλίου Σατορνίνου προφήτου . . . πάππου Λευκίου Μαλίου Ῥηγείνου . . . See also *Abh. Akad. Berlin*, 1924, No. i, p. 19 (10): Προφήτης Λεύκιος Μάλιο[ς] Σατορνείνος αὐ[το]ῆτης εὐσεβής. So the British Museum's inscription can be filled out thus:

[Πρ]οφήτης Λεύκι[ς Μά]  
 [λ]ιος Δ[ε]υκίου [Ῥηγ]εί[νον]  
 [Σατορνείν]ος πα[νη]γυ[ρικὸς]

The arrangement of the names of father and son is like that in *Rev. Phil.*, XXI (1897), p. 39, and in *Anc. Gr. Ins. Br. Mus.*, 923b.

When Hirschfeld, in his commentary on the published text of this inscription, suggested that the prophet of these lines might be related to Lucius Malius Saturninus, he did not see that the proper restoration was within his grasp.

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## FORESHADOWING AND SUSPENSE IN THE POSTHOMERICA OF QUINTUS OF SMYRNA.

The *Posthomerica* of Quintus of Smyrna not only is an epic of considerable intrinsic merit,<sup>1</sup> but is of especial interest in that it reproduces, in Homeric language and style, the contents of several of the lost Cyclic epics and thus serves to fill in the gap between the end of the *Iliad* and the beginning of the *Odyssey*. The poem is an ambitious production, comprising about 8,800 lines,<sup>2</sup> and has long been the subject of considerable study. Its dependence upon the *Iliad* and the *Odyssey*, its relation to the Cyclic epics, its borrowings from Greek tragedy and Alexandrian poetry, and the possibility of borrowings from the *Aeneid* have all been discussed in detail.<sup>3</sup> The most recent treatment of Quintus and especially of his relation to Vergil is that by W. F. J. Knight, who believes that Quintus did not know Vergil,<sup>4</sup> and that both Quintus and Vergil were following

<sup>1</sup> Cf. G. W. Paschal, *A Study of Quintus of Smyrna* (Chicago, 1904), pp. 63-67; W. N. Bates, "Quintus of Smyrna and the Siege of Troy" in *Classical Studies in honor of John C. Rolfe* (ed. by G. D. Hadzsits, Philadelphia, 1931), pp. 17-18. But cf. the adverse criticism in Christ-Schmid, *Geschichte der Griechischen Litteratur*, II, 2 (ed. 6, München, 1924), p. 964: "Die Erzählung ist ganz schülerhaft, ohne Spannung und Leben, der Ausdruck, mit manchen kleinen Variationen, ebenso wie zahlreiche Einzelmotive aus Homer und Apollonios Rhodios geborgt, die Epitheta farblos und einförmig, mit einem gewissen sentimentalen Zug, die Schilderung gelegentlich kleinlich bis zum Geschmacklosen."

<sup>2</sup> It is therefore about 3,000 lines longer than the *Argonautica* of Apollonius of Rhodes, and approximately 1,000 lines shorter than Vergil's *Aeneid*.

<sup>3</sup> Cf. H. Koechly, *Quinti Smyrnaei Posthomericonum Libri XIV* (Leipzig, 1850), Prolegomena, pp. viii-xxxii; F. Kehmptzow, *De Quinti Smyrnaei fontibus ac mythopoeia* (Kiel, 1891); F. Noack, review of Kehmptzow in *Gött. gelehrte Anzeigen*, 1892, pp. 769-812; W. Kroll, "Studien über die Komposition der Aeneis," *Jahrb. f. cl. Philol.*, Supplb. XXVII (1902), pp. 161-169; Paschal, *op. cit.*, pp. 68-82; P. Becker, "Vergil und Quintus," *Rhein. Mus.*, LXVIII (1913), pp. 68-90; R. Heinze, *Virgils epische Technik* (Leipzig, ed. 3, 1915), pp. 63-81; S. E. Bassett, "The Laocoon Episode in Quintus Smyrnaeus," *A. J. P.*, XLVI (1925), pp. 243-252; see also R. Keydell in *Jahresbericht üb. d. Fortsch. d. Kl. Altertums*, CCXXX (1931), pp. 60-80.

<sup>4</sup> W. F. J. Knight, *Vergil's Troy* (Oxford, 1932), p. 79: "The view

a common source which the former followed so closely that Vergil's departures from this common source can be determined.<sup>5</sup>

I do not wish primarily to reopen this much discussed problem of the relation of Quintus to Vergil. My purpose rather is to examine the manner in which Quintus foreshadows the later action of his narrative and the use which he makes of the elements of suspense and surprise. In a recent work,<sup>6</sup> I endeavored to analyze this technique as it appears in the *Iliad*, the *Odyssey*, the *Argonautica* of Apollonius of Rhodes, and the *Aeneid*, and I pointed out that Vergil, while using the same devices that are found in Homer, differs considerably in his treatment of suspense, since he combines the Homeric suspense, depending primarily upon anticipation, with a more modern type of suspense, in which the reader remains in ignorance or uncertainty of the future. It will therefore be of some interest to examine Quintus' use of foreshadowing and suspense and to compare his technique with that of the earlier epic poets. The results of this investigation will, I trust, throw some additional light upon the problem of the relation of Quintus to Homer and Vergil.

### I.

The various devices by which an epic poet may allude to the later action have elsewhere been described in detail.<sup>7</sup> Since with

that they (i. e., Quintus and Tryphiodorus) are not directly dependent on Vergil, a view adopted principally by Koechly in 1850 and Heinze in 1901, is now almost certainly right." On the other hand, Kehmptzow, Noack, Paschal, and Becker believe that Quintus knew and imitated Vergil, and as recently as 1924 we find the following statement: "In welchem Umfang Quintus römische Dichter (Vergilius, Ovidius, Seneca) benützt, ist schwer auszumachen. Gesichert ist jetzt die Benützung des Vergilius" (Christ-Schmid, *op. cit.*, p. 963). Cf. also Keydell, *op. cit.*, p. 75.

<sup>5</sup> Knight believes also that Tryphiodorus in his *Sack of Ilios* was following a source different from that used by Quintus and that the source of Tryphiodorus was used by Vergil also. He says (p. 80): "There seems to be only one solution of the problem: that there were two important poetic sources, one used by Vergil and Quintus, and the other by Vergil and Tryphiodorus." For a brief note on Tryphiodorus, see below, p. 77, n. 70.

<sup>6</sup> G. E. Duckworth, *Foreshadowing and Suspense in the Epics of Homer, Apollonius, and Vergil* (Princeton, 1933).

<sup>7</sup> Cf. C. Kraut, *Die epische Prolepsis, nachgewiesen in der Ilias*

one exception the same types of announcement are used by Homer, Apollonius, and Vergil,<sup>8</sup> one should expect to find all these types present in the *Posthomerica*. Such is not the case, however, and a brief analysis of the various categories used by Quintus will be necessary to introduce the more important discussion of the manner in which Quintus uses these devices.

Announcements of the future fall into three general categories; forecasts made by the poet himself directly to the reader, statements made by the gods which give information to the reader and, less frequently, to the mortal characters, and, finally, allusions to the later action which are made by the mortals themselves.

In the *Posthomerica* the forecasts of the future which are made by the poet are very numerous—more numerous than the combined references to the future made both by mortals and immortals. More than one-half of the announcements in this first category consists of direct statements or hints by means of which Quintus arouses the reader's interest in the coming action. Frequently he states that a certain individual went to his last sleep, or entered his last battle.<sup>9</sup> Such hints are vague and give no definite foreknowledge of the manner in which the fated outcome is to be brought about. A brief forecast in which the poet gives more detailed information is found in *Posthom.* X, 51-52:

ἦ γὰρ ἔμελλεν Ἀλέξανδρος θανέεσθαι  
χερσὶ Φιλοκτήταο πονεύμενος ἀμφ' ἀλόχοιο.<sup>10</sup>

The motive of the scales appears in the description of the battle of Achilles and Memnon (II, 540-541):

(Tübingen, 1863); I. Wieniewski, "La technique d'annoncer les événements futurs chez Homère," *Eos*, XXVII (1924), pp. 113-133; Duckworth, *op. cit.*, pp. 5-27.

<sup>8</sup> See below, p. 61, n. 14.

<sup>9</sup> Cf., e. g., *Posthom.* II, 161-162: βῆ δὲ πρὸς εὐνὴν ὑστατήην. For other forecasts of this type, cf. I, 171-173; X, 209; XII, 575; XIII, 27. All quotations and references are to Zimmermann's edition of the *Posthomerica* (Leipzig, 1891).

<sup>10</sup> As in both the Homeric poems and the *Argonautica* of Apollonius, ἔμελλε(ν) (ἤμελλε, ἤμελλον) appears very frequently in announcements of this type. Cf. *Posthom.* I, 203, 391; III, 14, 17; IV, 58; VII, 524; VIII, 125; X, 51; XII, 244; XIV, 630. In XII, 48 ἔμελλε is used in connection with the prophetic thoughts of the seer Calchas.

\*Ἐρις δ' ἔθνε τάλαντα  
ὑσμίνης ἀλεγεινά, τὰ δ' οὐκέτι ἴσα πέλοντο.

This motive is used to give a forecast of the future in *Il.* XXII, 209-213 (cf. *Il.* VIII, 68-74) and is imitated by Vergil in *Aen.* XII, 725-727, but Vergil characteristically refrains from mentioning the name of victor and vanquished. Becker states that Quintus is here following Homer.<sup>11</sup> This is not quite the case, for, apart from the fact that the reference to the scales in the *Posthomeric* resembles more closely in its vagueness the Vergilian passage, there is no real foreshadowing in the passage in the *Posthomeric*; the death of Memnon occurs immediately after the mention of the scales.<sup>12</sup> The weighing of the fates in *Il.* XXII, 209-213 does foreshadow the outcome of the battle between Achilles and Hector. In *Posthom.* II, 507-513, however, Quintus gives a forecast of the outcome that is similar in its effect to the Homeric passage; here the poet describes the two Fates that stood beside the warriors, one dark by the side of Memnon, one bright by Achilles.<sup>13</sup>

Another means by which the epic poet foreshadows a coming event is to state that the gods did or did not consent to the prayer of a mortal. Homer uses this device with great frequency; it appears also in the *Aeneid*, but not in the *Argonautica*.<sup>14</sup> Quintus gives us several instances of this type of foreshadowing.<sup>15</sup> The most interesting passage (*Posthom.* IX, 23-29) is one very similar to *Il.* XVI, 249-252 and to *Aen.* XI, 794-798,

<sup>11</sup> *Op. cit.*, p. 73. Paschal (*op. cit.*, p. 47) also calls the reference to the scales "a Homeric touch."

<sup>12</sup> Kehmptzow (*op. cit.*, p. 60) thinks that *Posthom.* II, 540 f. do not refer to the fates of individual warriors, but to the outcome of the battle in a more general sense. That this is unlikely is shown by the fact that the reference to the scales occurs just before the description of Memnon's death.

<sup>13</sup> Vergil refers to the *geminae pestes*, the *Dirae* (*Aen.* XII, 845) just before the death of Turnus. Becker says (*op. cit.*, p. 74): "Homerische wie vergilische Züge sind schönstens vereinigt."

<sup>14</sup> This is the only type of announcement found in the Homeric poems and in the *Aeneid* that is not used by Apollonius.

<sup>15</sup> Cf. *Posthom.* VII, 367-368; IX, 23-29; XI, 271-274; XII, 154; XIV, 120, 381-382. Poseidon's consent in XIV, 620 to the prayer of Nauplius that all the Greeks may perish is qualified by the statement in 627-628 that a few escaped death.

in each of which the god likewise grants part of the prayer and denies part.

Quintus frequently alludes to the future by describing the ignorance of the characters concerning the future.<sup>16</sup> A typical instance of this type of foreshadowing occurs in *Posthom.* III, 250-251:

ὥς ἔφατ' ἀκράαντον ἰεὺς ἔπος· οὐδέ τι ἦδ' ἔτι,  
ὅσσοι ἀμείνονες ἀνδρὸς ἐναντίον ἔγχος ἐνώμα.

As is the case in the Homeric poems and in the *Argonautica*, the epithet *νήπιος* is often used by Quintus to express the blindness of a person concerning his fate, as e.g. in *Posthom.* X, 329-331:<sup>17</sup>

νήπιη, οὐδ' ἄρ' ἐφράσσαθ' ἐὼν μόρον· ἥ γὰρ ἔμελλον  
κείνου ἀποφθιμένοιο καὶ αὐτῇ Κῆρες ἔπεσθαι  
ἐσσυμένως· ὥς γάρ οἱ ἐπέκλωσεν Διὸς Αἴσα.

Passages such as these arouse the reader's interest by hinting at the fate in store for the character. This is true also of the use of *νήπιος* by Homer and Apollonius and of the corresponding use of *infelix*, *nescius*, *demens*, etc. by Vergil in the *Aeneid*.

In two instances, however, Quintus departs from the practice of his predecessors. In X, 94-96 he refers to Galenus with the words:

νήπιος· οὐδ' ἄρ' ἐφράσσαθ' ἐὼν μόρον· ἥ γὰρ ἔμελλον  
ἐσσυμένως ὀλέεσθαι ὑπ' ἀργαλέον πολέμοιο,  
πρὶν δόμον ἐκ Πριάμοιο περικλυτὰ δῶρα φέρεσθαι.

and in XIII, 174-177 he speaks of Coroebus as follows:

νήπιος, οὐδ' ἀπόνητο γάμων, ὣν εἵνεχ' ἴκανε  
χθιζὸς ἐπὶ Πριάμοιο πόλιν, καὶ ὑπέσχετ' Ἀχαιοὺς  
Ἴλίου ἄψ ὤσαι· τῷ δ' οὐ θεὸς ἐξετέλεσεν  
ἐλπωρήν· Κῆρες γὰρ ἐπιπροέηκαν ὀλεθρον.

The surprising feature of these two passages is the fact that they give no foreshadowing of the death of the two warriors. In each case the death has already been described when the *νήπιος* passage occurs. Quintus is here using the Homeric device

<sup>16</sup> E.g., *Posthom.* II, 515: οὐδέ τι Κῆρας ἐπιχοιμένας ἐνόησαν; cf. IV, 100-102; XII, 565.

<sup>17</sup> Cf. also I, 96, 134, 374; XIII, 20.



in an un-Homeric manner, and is striving to arouse, not anticipation, but pity for the hero who has just met his fate.

The second passage is of especial interest on account of its similarity to *Aen.* II, 342-346, in which Vergil refers to Coroebus with the following words:

Illis ad Troiam forte diebus  
venerat insano Cassandrae incensus amore  
et gener auxilium Priamo Phrygibusque ferebat,  
infelix qui non sponsae praecepta furentis  
audierit.

The similarity of this to the Coroebus reference in *Posthom.* XIII, 174-177 makes it clear that either Quintus is imitating Vergil, or that Vergil and Quintus go back to a common source. Vergil in this passage foreshadows the approaching death of Coroebus. This similarity in foreshadowing to the *νήπιος* passages in the earlier epics makes it probable that Vergil is here reproducing the passage as it occurred in his source, and Quintus therefore, in failing to use the passage for the purpose of foreshadowing, is departing from the practice of the earlier poets. Thus whether the source of the Coroebus reference in the *Posthomeric* is the *Aeneid* or an earlier epic, we are fairly safe in assuming that Quintus is treating his material with considerable freedom.<sup>18</sup>

Another passage in which Quintus surprisingly fails to introduce foreshadowing occurs at VI, 184. He states that Priam and the Trojans entreated Eurypylus to overthrow the Greeks:

ὁ δ' ἐπέσχετο πάντα τελέσσειν.

One should expect at this point, on the basis of the Homeric technique, a *νήπιος* passage referring to Eurypylus' ignorance of his fate and foreshadowing, at least vaguely, his death at the hands of Neoptolemus. But such is not the case, and it is rather a striking omission, since the story of Eurypylus and Neoptolemus is one of the most important episodes in the *Posthomeric*. Quintus, in his treatment of this episode, makes a conscious effort to keep the reader in uncertainty of the outcome,

<sup>18</sup> This is one of several reasons which leads me to reject Knight's theory (*op. cit.*, p. 80) of the great similarity between Quintus and his source. See below, pp. 84 ff.

and the lack of foreshadowing at VI, 184 is part of this technique.<sup>19</sup>

Similes are occasionally used by Quintus to give a hint of the later action.<sup>20</sup> Here too he follows the practice of the earlier epic poets. For example, in *Posthom.* VII, 545-550, Quintus likens the Trojans when they are hard pressed by Neoptolemus to men who see above them a mountain torrent bringing death in its wake;<sup>21</sup> in VIII, 28-33 Neoptolemus rushes forth like the sun when accompanied by Sirius who scatters grievous disease among mortals.<sup>22</sup>

In the general category of forecasts made by the poet himself there is only one type of announcement that is not used by Quintus. The three earlier epic poets occasionally give foreknowledge of the future by means of invocations. There is only one invocation in the *Posthomeric* (XII, 306-313) and this makes no reference to the later action, but serves merely to introduce the list of warriors who entered the wooden horse.<sup>23</sup>

I shall not discuss in detail the various means by which both gods and mortals allude to and give information concerning the later action.<sup>24</sup> In the *Posthomeric* the forecasts which are made by the gods are very few in number. The immortals in Quintus are subordinate to Fate and their powers are limited.<sup>25</sup> It is not surprising that the part they play in foreshadowing

<sup>19</sup> See below, pp. 81 ff.

<sup>20</sup> Cf. *Posthom.* VII, 330-335, 359-365, 464-471, 545-550; VIII, 28-33, 39-44; XIII, 72-75. It is interesting to note that with one exception these similes all occur in VII and VIII which deal with the conflict of Neoptolemus and Eurypylus. Moreover, VII, 330-335 is used to give a wrong impression of the future—a type of false foreshadowing very effective under the circumstances. See below, p. 83.

<sup>21</sup> K. A. E. Niemeyer (*Ueber die Gleichnisse bei Quintus Smyrnaeus*, Zwickau, 1883, p. 13) compares *Il.* V, 597, a simile of a man afraid to cross a river. The situation, however, is not similar, and there is no element of foreshadowing in the Homeric simile.

<sup>22</sup> Cf. *Il.* XXII, 26-31; *Argon.* III, 956-959; *Aen.* X, 272-275.

<sup>23</sup> In this respect it is similar to the invocations which introduce catalogues in the earlier epics; cf. *Il.* II, 484-493; *Aen.* VII, 641-646, X, 163-165.

<sup>24</sup> For a classification of the various devices, cf. Wieniewski, *op. cit.*, pp. 117-121; Duckworth, *op. cit.*, pp. 16-20.

<sup>25</sup> For a brief comparison of the gods in Homer and Quintus, cf. Paschal, *op. cit.*, pp. 40-43.

the future is less than in the earlier epics. But, as Paschal says,<sup>26</sup> "Quintus has made an effort to preserve their Homeric character," and the gods occasionally utter prophecies and prophetic statements<sup>27</sup> and send prophetic signs or omens to mortals.<sup>28</sup> Apart from this, however, the gods have no share in the announcements of the future. No foreshadowing is given in the form of promises,<sup>29</sup> oaths, commands, etc. It is in the absence of forecasts made by the gods that Quintus departs in the most striking fashion from the practice of Homer, Apollonius, and Vergil.

One important passage in the *Posthomeric* must be mentioned in this connection. In X, 343-360 Hera and the Seasons discuss certain coming events. The passage is unusual in that the poet merely catalogues the topics discussed by the goddesses. There is mention of the later marriage of Deiphobus and Helen, the wrath of Helenus, his flight and capture, and the theft of the Palladium in accordance with his counsel. All these are events which take place before the fall of the city and which, therefore, should be described before XII. But, curiously enough, the events mentioned in this passage play no part in the later action. In other words, as the poem now stands, the foreshadowing in X, 343-360 is not fulfilled, and in this respect the passage is unique. There are no unfulfilled forecasts of such extent in Homer, Apollonius or Vergil.<sup>30</sup> Why Quintus failed to include the fulfillment of this prophetic passage is difficult to say. Kehmptzow<sup>31</sup> believes that the events were described by Quintus and that a long passage has fallen out after XI. Paschal,<sup>32</sup> on the contrary, suggests that the lines in X "are probably only a summary of events which Quintus thought unwise to incorporate at length in a poem already growing too

<sup>26</sup> *Op. cit.*, p. 41.

<sup>27</sup> Cf. II, 167-172; III, 118-122, 613-615, 649-654.

<sup>28</sup> Cf. I, 198-200; X, 265-267; XII, 11-20, 54-58, 503-520.

<sup>29</sup> Thetis' promise in V, 123-127 to give the armor of Achilles serves merely to introduce the conflict between Odysseus and Ajax.

<sup>30</sup> The unfulfilled forecasts in the earlier poems are concerned only with the deaths of minor individuals; cf. Duckworth, *op. cit.*, pp. 44, 45, n. 106.

<sup>31</sup> *Op. cit.*, pp. 39-41.

<sup>32</sup> *Op. cit.*, p. 77. See also Bassett, *op. cit.*, p. 244, n. 1.

long." Such a procedure on the part of an epic poet would be very unusual, however, and Kehmptzow's theory of a lacuna seems preferable in view of the references to Athena's anger in XII, 38 and 377 ff., and to Deiphobus as Helen's husband in XIII, 354 ff. These passages at least imply that Quintus had in mind the events which he forecasts in X, 343-360.

In his use of forecasts made by the mortals, Quintus again departs somewhat from his epic predecessors. There are in the *Posthomerica* no solemn declarations, oaths, or vows which contain hints of the later action. On the other hand, there is considerable foreshadowing in the prophecies of seers<sup>33</sup> and in the prophetic statements of dying heroes. The latter are especially interesting. The wounded Achilles tells the Trojans that they will not be able to escape destruction (III, 167-169) and Machaon as he dies prophesies the death of Eurypylus on the Trojan plain (VI, 426-428). Paschal<sup>34</sup> compares this prediction to that of Patroclus in *Il.* XVI, 852-854. The words of Patroclus, however, as well as those of Hector in *Il.* XXII, 356-360 give definite foreknowledge. The prophecies of Achilles and Machaon in the *Posthomerica* are very vague, and in this respect resemble more closely the words of Oodes in *Aen.* X, 739-741.

Other devices by means of which the characters in the *Posthomerica* allude to the later action include promises, consent or refusal of a person to the request of another,<sup>35</sup> and citation of announcements made at an earlier time.<sup>36</sup>

<sup>33</sup> Cf. VI, 59-67; IX, 325-332; XI, 137-141 (the words of a god masquerading as a seer give to the reader a more definite announcement of the future); XII, 11-20, 48-49, 51-60, 540-551 (the prophecy of Cassandra is not believed); XIII, 334-343. The statement of Helenus in VIII, 256-266 is not a prophecy but merely an exhortation resulting from the presence of Ares; it serves to introduce the renewed fighting and to that extent can be said to foreshadow the continued resistance of Troy. It hardly arouses suspense for the fate of Neoptolemus, since the reader has learned in VII, 367-368 that he will return home.

<sup>34</sup> *Op. cit.*, pp. 54 f.

<sup>35</sup> In XII, 84-86 the refusal of Neoptolemus and Philoctetes to accede to the request of Odysseus gives no foreshadowing but serves merely for characterization.

<sup>36</sup> IV, 92-96 refer to a previously expressed plan of Thetis to hold the funeral games, but there has been no earlier mention of her desire. The omission is, however, not surprising, as the reference to Thetis

In addition to the types of foreshadowing discussed above, Homer, Apollonius, and Vergil look ahead in a more general way to the future by the use of certain devices such as wishes, threats, expressions of hope and fear, etc.<sup>37</sup> All these are found in the *Posthomericæ*, with the exception of foreshadowing by analogy. Quintus' use of expressions of hope and fear, of confidence and despair is especially striking. Such expressions are very numerous,<sup>38</sup> and more than one-third of them reflect hope or fear that is at variance with the real outcome. This portrayal of the emotions of the characters is very effective in that it often adds to the reader's anticipation a touch of uncertainty concerning the future.<sup>39</sup>

Quintus thus omits many of the types of foreshadowing that were used by Homer, Apollonius, and Vergil, but he keeps the most important devices of his predecessors, especially those in which he himself alludes to the future action. It remains now to examine the manner in which Quintus has utilized these devices. Does he arouse suspense of anticipation such as is found in the Homeric poems, or does he strive to keep the reader in uncertainty in the Vergilian fashion? Is the reader aware of future events long before they occur, or is he left in ignorance of many events?

## II.

Although the majority of the forecasts in the *Posthomericæ* allude to the later action of the poem, several refer to events which take place after the close of the epic.<sup>40</sup> These all refer to

serves merely to justify and motivate the games that are to be held. Likewise we are not told when Paris received the prophecy mentioned in X, 263-264. In similar fashion, the promises in *Od.* X, 483 f.; *Aen.* VIII, 530 f., and XI, 45 ff. were not mentioned at the time when they were made, but only later when the poet had need of them.

<sup>37</sup> Cf. Duckworth, *op. cit.*, pp. 20-26.

<sup>38</sup> I count 64 such expressions in the *Posthomericæ*. The approximate totals for the other epics are: *Iliad*, 100; *Odyssey*, 60; *Argonautica*, 55; *Aeneid*, 30. In the frequency of his use of such expressions Quintus thus follows the procedure of the poets of the earlier Greek epic.

<sup>39</sup> Cf. Duckworth, *op. cit.*, pp. 93 ff. For a more detailed discussion of this point, see "Suspense in Ancient Epic—an Explanation of *Aeneid* III," *T. A. P. A.* LXII (1931), pp. 124-140.

<sup>40</sup> This is true also of the epics of Homer, Apollonius, and Vergil; particularly of the *Iliad*, with its numerous references to the death of



the fates of individual characters. Quintus gives directly to the reader information concerning the fate in store for Andromache (XIII, 290), Antiphus (VIII, 124-127),<sup>41</sup> Scylaceus (X, 151-166) and Odysseus (XIV, 630-631). The prophecies and forebodings of the characters allude to the grief of Peleus when he shall learn of Achilles' death (III, 450-452, 480-489) and to Peleus' approaching death (III, 613-615); to the future fate of Briseis (III, 569-573), Tecmessa (V, 560-564), Agamemnon (V, 470-475), and Aeneas (XIII, 334-343);<sup>42</sup> and to the later marriage of Neoptolemus and Hermione (VI, 85-92; VII, 213-218). The only characters who have any foreknowledge or foreboding of their fate are Briseis, Tecmessa, Neoptolemus, and Aeneas; the others are kept in ignorance of what the future holds in store for them. In this respect Quintus again differs from the technique of Homer, for in the Homeric epics the events lying outside the action of the poem itself are known to the mortal characters. The *Posthomericæ*, therefore, in its treatment of events which do not occur in the action of the epic, is similar to the *Argonautica* and the *Aeneid*, in each of which the reader has more foreknowledge of events of this type than have the characters.

It is surprising to find that Quintus gives as much space to men like Antiphus and Scylaceus as he does to Agamemnon and Odysseus. In view of the important part which these two heroes play in Greek epic and drama, one should expect much more foreshadowing of their later adventures. On the contrary, Quintus says merely that Odysseus is destined to suffer many woes because of Poseidon's wrath (XIV, 630-631) and (in V, 474-475) has Ajax express the following wish concerning Agamemnon:

“μηδ' ὃ γ' ἀπήμων  
ἔλθοι ἐὼν ποτὶ δῶμα λιλαιόμενός περ ἰκέσθαι.”

Quintus apparently felt that such vague allusions were sufficient

Achilles and to the fated fall of Troy, and of the *Aeneid*, with its descriptions of outstanding scenes of Roman history and of the greatness of Rome under Augustus.

<sup>41</sup> Cf. *Od.* II, 19-20.

<sup>42</sup> Cf. also XI, 137-141 in which Apollo in the guise of Polymestor prophesies a long life for Aeneas and Eurymachus.



to call to the reader's mind the well-known accounts of Agamemnon's death and the wanderings of Odysseus.

The most interesting passage of foreshadowing beyond the bounds of the epic is Calchas' prophecy of the glorious future that awaits Aeneas and his descendants (XIII, 334-343):

“ἴσχεσθ' Αἰνείας κατ' ἰφθίμοιο καρήνον  
βάλλοντες στονόνετα βέλη καὶ λοίγια δοῦρα·  
τὸν γὰρ θέσφατόν ἐστι θεῶν ἐρικυδέϊ βουλῇ  
Θύμβριν ἐπ' εὐρυρέεθρον ἀπὸ Ξάνθοιο μολόντα  
τευξέμεν ἱερὸν ἄστυ καὶ ἐσσομένοισιν ἀγητόν  
ἀνθρώποις, αὐτὸν δὲ πολυσπερέεσσι βροτοῖσι  
κοιρανέειν· ἐκ τοῦ δὲ γένος μετόπισθεν ἀνάξειν  
ἄχρης ἐπ' ἀντολίην τε καὶ ἀκαμάτου δύσιν ἡοῦς·  
καὶ μὲν οἱ θέμις ἐστὶ μετέμμεναι ἀθανάτοισιν,  
οὐνεκα δὴ πάϊς ἐστὶν ἐνπλοκάμου Ἀφροδίτης . . .”

This is very different from the prophecy of Poseidon concerning Aeneas in *Il.* XX, 300-308, and has been used as evidence that Quintus knew Vergil.<sup>43</sup> It is true that the prophecy of Calchas in the *Posthomerica* reflects the spirit of Vergil's *Aeneid*, but we need not be surprised to find that a poet of the late Empire refers to Rome and the descendants of Aeneas in these terms. If we find many other similarities between Quintus and Vergil, this passage may be used as corroborative evidence, but in itself it is not conclusive.

### III.

We turn now to a discussion of the manner in which Quintus foreshadows the events that take place within the poem itself.<sup>44</sup> Most of the forecasts allude to the fate that is destined to come upon individual characters, such as Penthesilea, Memnon, Achilles, Ajax, Eurypylos, and Paris. In only two cases, however, do the characters have any foreknowledge of their own fate. Achilles has been forewarned by his mother of his death at the hands of Apollo (III, 78-82),<sup>45</sup> and Paris when wounded goes to

<sup>43</sup> Kehmptzow, *op. cit.*, p. 53.

<sup>44</sup> For an outline of the *Posthomerica*, cf. Bates, *op. cit.*, pp. 2-13; Paschal, *op. cit.*, pp. 45-63; the latter contains numerous cross-references to the Homeric poems.

<sup>45</sup> Cf. *Il.* XXI, 277-278. In *Il.* XIX, 416-417 and XXII, 358-360 Achilles is to meet his death at the hands of Apollo and Paris.

Oenone since he can escape death only by her hands, if at all (X, 261-263). Moreover, the reader learns of the foreknowledge of Achilles and Paris only after they have been wounded and are near death. In other words, Quintus consistently portrays the characters as ignorant of the future and regularly gives to the reader a foreknowledge that is denied to them. As I have shown in the case of the earlier epics, the possession of such information by the reader makes for greater anticipation and more effective irony. Quintus is here following the practice of Homer, for in the *Iliad* no character has any foreknowledge of his fate, except in the case of Achilles whose death does not occur in the epic.

One of the most striking features of Homer's technique is the manner in which the foreshadowing in both the *Iliad* and the *Odyssey*, vague at first, becomes increasingly definite, until, early in the second half of each poem, the foreshadowing culminates in a forecast of the remainder of the poem.<sup>46</sup> Much of the unity of the Homeric epics results from this development from vague foreshadowing to definite foreknowledge. There is nothing like this in the *Posthomeric*. The climax of Quintus' epic is the story of the wooden horse and the sack of Troy in XII and XIII, but the reader is given no definite foreknowledge of this until the beginning of XII.

There are frequent allusions to the fall of Troy throughout I-XI.<sup>47</sup> The poet hints at or mentions the destruction of the city,<sup>48</sup> and similar allusions are found in various prophetic statements;<sup>49</sup> the prophecy of Calchas that Troy will be taken in the tenth year is mentioned (VI, 61-63; cf. VIII, 472-477). The reader learns from these passages nothing beyond the fact that the city is doomed, for Quintus gives no foreknowledge of the manner in which the city will be captured. Still more vague

Kehmptzow (*op. cit.*, p. 3) cites *Posthom.* III, 78-82 as an illustration of Quintus' freedom in his use of Homeric material.

<sup>46</sup> Cf. Duckworth, *op. cit.*, pp. 38-40.

<sup>47</sup> In IV, 325-326 there is a reference to Epeius who built the wooden horse which is described as *κακὸν Πριάμοιο πόλιν*. The horse is not mentioned again until XII.

<sup>48</sup> I, 373-375; IV, 56-61; IX, 23-29; X, 153; XI, 271-274.

<sup>49</sup> Cf. the words of Hera (III, 118-122), Achilles (III, 167-169), and Calliope (III, 649-654).

are the occasional forebodings of the Trojans,<sup>50</sup> and the effect of such forebodings is partly nullified by the expressions of despair that are uttered from time to time by many of the Greek heroes.<sup>51</sup> After the death of Achilles the Trojans too are confident and think that the Greeks will flee (IV, 22-29, cf. X, 10-25).

Thus Quintus not only keeps the foreshadowing of the climax of his narrative very vague; but, what is more interesting, he strives to counteract the effect of the reader's foreknowledge of the fall of Troy by making him share the uncertainty of the Greeks who disregard the prophecies which they have received at an earlier time. This latter feature of his technique is found in Homer, Apollonius, and Vergil.<sup>52</sup> Where Quintus departs from Homer is in his failure to give in detail any foreknowledge of the later part of his poem. The technique of Quintus, therefore, tends to lessen the unity of the *Posthomerica* as a whole. It is a curious fact that in the Homeric epics, the unity of which has been stubbornly denied for more than a century, foreshadowing is used to develop and unify the poems, while in the *Posthomerica*, undoubtedly the creation of one poet, there is no such striving for unity by the use of foreshadowing.

Other instances in which Quintus foreshadows events that take place in later books are rare.<sup>53</sup> The suicide of Ajax, son of Telamon, whose madness and death are described in V, is subtly implied by the poet when he says that it was not fated for the

<sup>50</sup> Cf. I, 15-17; II, 9-25, 88-90; X, 380-384.

<sup>51</sup> Cf. the words of Ajax (III, 446-449), Agamemnon (III, 494-503), Menelaus (V, 422-426), and Teucer (V, 509-512). The fears expressed by Diomedes in VII, 422-430 do not belong in this category as they are merely part of his exhortation to battle. The poet's statement in VIII, 499-501 that the Greeks feared defeat has been criticized by Paschal (*op. cit.*, p. 57) as a feeble imitation of the beginning of *Iliad* IX, where there is considerable reason for fear. The fear of the Greeks at the end of *Posthom.* VIII can, however, be justified. The aid of Ares and Zeus has given renewed courage to the Trojans; cf. VIII, 265-266, 282-285, 443-460. Quintus may also have inserted VIII, 499-501 to counteract the effect of the reference to the prophecy of Calchas in VIII, 472-477, and to maintain the uncertainty concerning the outcome. There is a similar striving for suspense at the end of V (662-663).

<sup>52</sup> See above, p. 67, n. 39.

<sup>53</sup> For a discussion of the lack of foreshadowing in the *Posthomerica*, see below, pp. 79 ff.

sword of an enemy to taste of the blood of Ajax (I, 566-567), and again (IV, 100-102) when the poet says that Ajax did not know that a grievous fate would come upon him after the games. This is foreshadowing in the truest sense of the word—alluding mysteriously to a coming event without giving information. The coming of Neoptolemus to the war in VII is foretold by Hera in III, 118-122 and by the poet in III, 752-762 (cf. IV, 169-170; VI, 64-67). It is important to notice in this connection that Quintus withholds all mention of the fate of Neoptolemus. Paris meets his death in X; the only reference to it before X occurs in the threat of Ajax, III, 344-348.<sup>54</sup> The reader receives hints also of the action in XIV, the departure of the Greeks and the death of Ajax, son of Oileus (IV, 56-61; VI, 523-524, XIII, 423-424). In addition to the references to the fall of Troy, the above are the only instances of foreshadowing which allude to action in the later books, and practically all the references are brief and vague, arousing curiosity rather than anticipation.<sup>55</sup>

When we turn to an examination of the individual books, we find that Quintus uses a very different technique. Instead of being sparing in his use of forecasts, he sows with a lavish hand and again and again reminds the reader of the fate in store for a certain individual. One gains the impression that Quintus is blindly following what he believes to be the technique of earlier epic without realizing that foreshadowing, to be effective, must be more widely distributed and not concentrated merely in certain episodes.

Book I tells of the coming of Penthesilea and of her death. The poet's statement at the beginning (3-4) that the Trojans fear Achilles strikes the keynote of the book, for it is by the hand of Achilles that Penthesilea falls. Early in the book (30-32) the poet states that the Erinyes followed her; and, although the Trojans, and especially Priam, delight in her coming (63-84), the reader is warned of her fate with the words (96-97):

*νηπίη, οὐδέ τι ἤδη ἐνμμελὴν Ἀχιλῆα,  
ὄσσον ὑπέρτατος ἦεν ἐνὶ φθισήνορι χάρμη.*

<sup>54</sup> There is a possible hint of his death in II, 144-145, if Paris is the son of Priam to whom the poet refers.

<sup>55</sup> This in general is true of Vergil also, as compared with Homer.

Andromache foresees Penthesilea's death (100-104), as does Priam (198-202). But Quintus is not content with the anticipation which he has created. Again and again he refers to Penthesilea's folly and to the death that awaits her.<sup>56</sup> Repetition of foreshadowing for the purpose of increasing the reader's expectancy was frequently used by the earlier epic poets,<sup>57</sup> but never was it used to such an extent as here. Moreover, in the earlier epics, retardation was often coupled with repetition of foreshadowing, so that the anticipation was tempered by a delay in the fulfilment of the expected issue. There is one slight touch of retardation in the story of Penthesilea (380-382, cf. 388-395), and the fear of the Greeks (315-319) contributes a bit of uncertainty, but on the whole the foreshadowing in this episode fails to be effective because Quintus inartistically uses too much repetition within the short space of one book.

Quintus uses practically the same technique in his treatment of the episode of Memnon in II. Again the poet states that the Trojans feared Achilles (5-8). There is no foreshadowing here, but the statement sets the tone of the book; Achilles will be victorious. Early in the book we are told (by Polydamas in 45-48) that Memnon is coming to his death. There is a touch of irony, therefore, in Priam's hope that the Aethiopians may drive back the Greeks and burn their ships (107-110, cf. 127-130). Quintus then alludes several times to Memnon's death,<sup>58</sup> but he is more successful here than in the episode of Penthesilea. Zeus speaks to the gods and says that many will be slain on each side and that the fates are relentless (167-172), but he does not give a definite forecast of the outcome of the conflict between Memnon and Achilles. The omission of a definite prophecy at this point is very effective. Quintus does not permit Zeus to give to the assembled gods a prophecy of the future such as he gives to the gods in the Homeric poems. The speech of Zeus in 167-172 is in many respects similar to Jupiter's words in *Aen.* X, 107-113, although the latter passage is more successful in retarding the final issue and in keeping the reader in a mood of uncertainty. But that Quintus is striving to achieve somewhat the

<sup>56</sup> I, 131-137, 171-173, 203-204, 373-375, 388-395; cf. 569-572.

<sup>57</sup> Cf. Duckworth, *op. cit.*, pp. 60-66.

<sup>58</sup> II, 161-162, 360-362, 507-513.



same effect is indicated also by his statement in 490-491 that the conflict was equal, and by referring to the grief of the Nereids for Achilles as well as to the grief of Eos for Memnon (497-501).<sup>59</sup> Again, even after the Fates are described as standing by the side of the two warriors (507-513), Quintus retards the expected outcome by referring to the evenness of the conflict (514-537). Quintus thus handles the story of Memnon's death with considerably more skill than was the case in his foreshadowing of Penthesilea's death.<sup>60</sup>

Another instance of Quintus' attempt to combine retardation with anticipation occurs in his account of the homeward voyage of the Greeks. XIV, 120 gives the general forecast of the contents of the last book:

ἀλλ' οὐ πᾶσι πατήρ ἐπὶ νόστον ἔνευσε.

In spite of this forecast, however, the prompt obedience of the Greeks to the demand of Achilles' shade for the sacrifice of Polyxena gives rise to the hope that the threatened storm will be averted.<sup>61</sup> The fears of Calchas (360 ff.) again remind the reader of the coming disaster, although the Greeks have no knowledge of it. Their prayers for a safe return are mixed with the winds and float away with the clouds (381-382):<sup>62</sup>

<sup>59</sup> The fact that the mother of Achilles apparently does not mourn for him along with the other Nereids might be construed as a hint that Achilles will be successful, but I doubt if it was so intended by Quintus.

<sup>60</sup> There is less repetition in the foreshadowing of the anger of Ajax and his suicide in V; in addition to the hints in I, 566-567 and IV, 100-102, cf. V, 141-151, 321, 332. The hope expressed in V, 172-174 heightens the tension but is not realized. Quintus' treatment of the story of Paris in X is typical; Paris' death is forecast in 51-52 and the reader is reminded of his fate in 209, 261-269. The inability of the doctors to heal Paris' wound (cf. 260 f.) recalls the similar situation in *Aen.* XII, 400-407, but the Vergilian passage has an entirely different effect since it serves to arouse the fears of the reader concerning the fate of Aeneas.

<sup>61</sup> Cf. 327-328. When the first storm begins (247 ff.), the Greeks know exactly what to do and hasten to fulfill Achilles' wish. They are justified, therefore, in expecting that the cessation of the storm in 327-328 will be permanent, and the reader to some extent shares this hope.

<sup>62</sup> Cf. *Posthom.* VIII, 10-11: ἀλλὰ οἱ ἐλπὼρὴ μὲν ἔην ἐναλὲγκιος αὖρη | μαψιδίη.



εὐχολαὶ δ' ἀνέμοισι μίγην καὶ ἀπόπροθι νηῶν  
μαψιδίως νεφέεσσι καὶ ἡέρι συμφορέοντο.

This is very similar to the passage in which Vergil forecasts the tragic outcome of the expedition of Nisus and Euryalus (*Aen.* IX, 312-313):<sup>63</sup>

multa patri mandata dabat portanda; sed aurae  
omnia discerpunt et nubibus irrita donant.

The joy with which the Greeks, ignorant of their fate, set sail (403-406) strikes even a deeper note of irony than Vergil's reference to the Trojans as *laeti* (*Aen.* I, 35) just before the storm breaks.

In the *Posthomeric* the storm comes upon the Greeks at the instigation of Athena and the ship of Ajax is wrecked. This seems to be the fulfilment of the poet's words in VI, 523-524 (cf. XIII, 423-424), but the end is not yet. Quintus maintains the reader's interest by retarding the expected death of Ajax (XIV, 559-564). Moreover, Ajax remains undaunted and his words of confidence (565-567) help to make the final tragedy all the greater. At the climax of the Homeric epics both Achilles and Odysseus feel uncertainty and despair before they achieve their final victories, and the reader's suspense is thereby heightened; Ajax goes to his death boasting that he will escape it; in this case the emotion of the reader is anticipation tinged with pity, not uncertainty as in the Homeric epics.

The most striking instance of repeated foreshadowing occurs in Quintus' account of the wooden horse and the taking of Troy. Up to XII the capture of the city is foreshadowed only in a very vague fashion,<sup>64</sup> but at the beginning of XII the reader learns how the city will be taken from the words of Calchas describing the omen of the hawk (11-20) and from the plans suggested by Odysseus (25-45) which finally meet the approval of all the

<sup>63</sup> Cf. also *Aen.* X, 652; XI, 795, 798. *Od.* VIII, 408 f. is not a close parallel. A. Cartault (*L'Art de Virgile dans l'Énéide*, Paris, 1926, p. 698) says of *Aen.* IX, 312-313: "motif proverbial dans l'expression duquel Virgile s'est inspiré de Catulle." Cf. *Cat.* LXIV, 142: *Quae cuncta aerii discerpunt irrita venti*. See also *Cat.* XXX, 9 f.; LXIV, 59; LXV, 17.

<sup>64</sup> See above, pp. 70 f.

other Greeks (cf. 100-103). The wooden horse will prove disastrous for the Trojans (48-49) and has the favor of the gods (51-60). Again and again as the narrative progresses Quintus reminds his reader both of the coming success of the treachery of the Greeks, and of the inability of the Trojans to ward off destruction from their city; Athena hearkens to the prayer of Epeius to bless the horse (154); Sinon is destined to complete his task (244-245);<sup>65</sup> the Trojans are blind to the omens that foretell the destruction of the city (521-524, cf. XIII, 19-20),<sup>66</sup> and likewise disregard Cassandra's prophecy (XII, 562-566);<sup>67</sup> the horse is λυγρός (571), and it is the last night of the Trojans (575). In this way the poet builds up foreboding for the great disaster and strives to develop an atmosphere of horror and despair.

In addition to the numerous instances of foreshadowing in XII cited above, Quintus in three longer passages refers to the fated fall of the city. They are the description of the entrance of the wooden horse into the city (433-443), the unfavorable omens (503-520), and Cassandra's prophecy (540-551). The first of these three passages is of especial interest and goes as follows:

ὥς οἱ γέ σφισι πῆμα ποτὶ πτόλιν ἔργον Ἐπειοῦ  
 πανσυνδῆ μογέοντες ἀνείρουν. ἀμφὶ δ' ἄρ' αὐτῷ  
 πολλὸν ἄδην στεφέων ἐριθηλέα κόσμον ἔθεντο·  
 αὐτοὶ δ' ἐστέψαντο κάρη· μέγα δ' ἤπνον αἰετοὶ  
 ἀλλήλοισ ἐπικεκλομένων· ἐγέλασε δ' Ἐννὼ  
 δερκομένη πολέμοιο κακὸν τέλος, ὑψόθι δ' Ἥρη  
 τέρπετ', Ἀθηναίη δ' ἐπεγίθνε· οἱ δὲ μολόντες  
 ἄστρῳ πότι σφέτερον μεγάλης κρήδεμνα πόλῃος  
 λυσάμενοι λυγρὸν ἵππον ἐσήγαγον· αἱ δ' ὀλόλυνξαν  
 Τρωιάδες, πᾶσαι δὲ περισταδὸν εἰσορόωσαι  
 θάμβεον ὄβριμον ἔργον· ὃ δὲ σφισιν ἔκρυνε πῆμα.

<sup>65</sup> Sinon's promise to return victorious or not at all (250-252) is a conventional boast and has no value as foreshadowing the outcome; cf. the similar words of Eurypylos (VI, 313-314). Such boasts reveal merely the speaker's inability to foresee the future.

<sup>66</sup> Cf. the blindness of the suitors in the *Odyssey* (e.g., XX, 345 ff.; XXII, 32 f.). Vergil similarly describes the ignorance of the Trojans concerning the real meaning of the horse in *Aen.* II, 195-198, 244.

<sup>67</sup> Cf. *Aen.* II, 246-247.

There is a striking similarity between this passage and *Aen.* II, 237-249; the horse is referred to in a similar fashion,<sup>68</sup> and there is the same irony in the delight with which the Trojans receive the horse.<sup>69</sup> The presence of verbal parallels is not so surprising as is the fact that the two poets are using in the same way repetition of foreshadowing, development of foreboding, and irony resulting from the ignorance of the characters. Nowhere in Homer or Apollonius is anticipation built up through such a series of forecasts as it is in the foreshadowing of the fall of Troy in the *Aeneid* and the *Posthomeric*.<sup>70</sup>

The anticipation which Quintus creates in XII and XIII is unrelieved by any real touch of uncertainty. He says that the men in the horse sat midway between victory and death (XII, 334-335, cf. 350-351) and the passage is somewhat effective in heightening the suspense, since it precedes most of the foreshadowing in XII. Had Quintus so wished, he could have introduced an effective bit of suspense into a very tense moment in the climax of his narrative. In the Homeric epics both Achilles and Odysseus are overcome with doubt before their victories, and the suspense of the reader is appreciably heightened.<sup>71</sup> Quintus for a moment gives the impression of doing the same; he says that Sinon, when giving the signal, was afraid that the

<sup>68</sup> Cf. *πῆμα* (*Posthom.* XII, 433, 443), *λυγρὸς ἔππος* (441); *fatalis machina* (*Aen.* II, 237), *monstrum infelix* (245).

<sup>69</sup> Cf. *Posthom.* XII, 434-436, 441-443; *Aen.* II, 238-239.

<sup>70</sup> Tryphiodorus in his short poem on the fall of Troy also makes great use of the devices of foreshadowing: invocation, simile, hints by the poet, statements of consent to prayers, references to the ignorance of characters, omens, prophecies, expressions of foresight, etc. Even more than Quintus, Tryphiodorus repeatedly refers to the fatal effect of the horse and to the downfall of the city. Cf. 58, 136-138 (words of Odysseus), 221, 228, 245-246, 304-357, 376-416 (prophecy of Cassandra), 417-418, 447, 452-453, 506-507 (the scales of Zeus; cf. above, pp. 60 f.), 533-538, 577-580, 613-615. Lines 304-337 are especially interesting in this connection, for they describe the taking of the horse into the city, the joy of the Trojans and their blindness to the coming disaster, the wreathing of the neck of the horse, the unfavorable omens that attend its entrance into the city. Lines 304-315 thus create the same anticipation and irony that are found in *Aen.* II, 237-249 and *Posthom.* XII, 433-443.

<sup>71</sup> Cf. Duckworth, *op. cit.*, pp. 96 ff. See above p. 75.

Trojans might see the light and discover the plot (XIII, 24-26). But the following lines describe the successful giving of the signal, and what might have been an effective touch of uncertainty is at once destroyed. Quintus, therefore, differs decidedly from Homer's practice of combining uncertainty with anticipation at the climax of the epic by means of the fears of the characters.

As a result of the numerous references in the *Posthomericæ* to the wooden horse and to the fated downfall of the city, the reader gains the impression that it is through no cowardice on the part of the Trojans that Troy is destroyed.<sup>72</sup> Much has been written about Vergil's innovations in his treatment of the theme of the Trojan war; since he was the first to narrate the events from the Trojan standpoint, he had to tell the story in such a way as to arouse sympathy for Aeneas and the Trojans, and to show that they were brave and noble even in the face of a defeat ordained by fate. Thus he introduced into *Aeneid* II many allusions to the treachery of the Greeks and to the hostility of the gods toward the Trojans.<sup>73</sup> If, as Knight maintains,<sup>74</sup> Quintus and Vergil go back to the same source, a source that Quintus follows closely, we are faced with a troublesome dilemma. It seems clear that Quintus, in spite of the fact that he tells the story from a Greek standpoint and makes Neoptolemus his hero, has many of the elements that serve to rehabilitate the Trojans and to ennoble them even in defeat.<sup>75</sup> This similarity of spirit seems of considerably more weight than the presence in the two poems of numerous verbal parallels.<sup>76</sup> If Quintus did follow a pre-Vergilian source, then we cannot attribute to Vergil

<sup>72</sup> The Greeks themselves imply that Troy cannot be taken without the use of trickery; cf. XII, 8-10, 19-20, 74-83.

<sup>73</sup> Cf. Heinze, *op. cit.*, pp. 5 ff.; H. W. Prescott, *The Development of Virgil's Art* (Chicago, 1927), 305 ff.

<sup>74</sup> *Op. cit.*, pp. 79 ff.

<sup>75</sup> The two possible exceptions to this are the torture of Sinon (XII, 365 ff.) and the description of the drunkenness of the Trojans (XIII, 1 ff., 27 ff.). Knight is wrong when he says that Vergil "suppresses the recollection that the Trojans were drunk on their last night" (*op. cit.*, p. 94); cf. *Aen.* II, 265.

<sup>76</sup> Cf. especially the parallel passages cited by Noack, *op. cit.*, pp. 797 ff.

as his own innovation the treatment of the Trojans and the Greeks which we find in *Aeneid* II; on the other hand, if we are indebted to Vergil for the rehabilitation of the Trojans, then clearly we must admit, not only the possibility, but even the probability that Quintus (and Tryphiodorus as well) knew and imitated Vergil in many respects.

#### IV.

I have already implied that Quintus in many of his episodes fails to understand and appreciate properly the use and value of foreshadowing as it is found in the earlier epics, especially the Homeric epics.<sup>77</sup> This statement is misleading, however, unless we look on the other side of the picture. A complete analysis of Quintus' use of foreshadowing and suspense must take into consideration the fact that Quintus is evidently striving for an effect very different from that found in the Homeric epics. The most amazing feature of his technique is his failure to give to the reader in many instances any foreknowledge of the later action.<sup>78</sup> In other words, Quintus arouses in the reader's mind, not the questions "When?" and "How?", but the question "What?" in a manner that is most un-Homeric, and also very unlike anything found in the *Argonautica*. Only Vergil, in his withholding in III of many of the events that await Aeneas on his journey, and in his failure to give to the reader much foreknowledge of the second half of the *Aeneid*, shows a technique similar to that which is found in the *Posthomeric*.

The following may be cited as instances in which Quintus either gives no real foreknowledge of an episode until the episode actually begins, or else fails to foreshadow the outcome of an episode.

1) There is no reference to Memnon until the beginning of II, in which book is found the complete story of his coming to the war and his death.

2) The death of Achilles is not foreshadowed until the beginning of III,<sup>79</sup> shortly before he is slain. In other words, he

<sup>77</sup> See above, p. 72.

<sup>78</sup> Cf. Duckworth, *op. cit.*, pp. 100-115 for a discussion of the lack of foreshadowing in the *Argonautica* and especially in the *Aeneid*.

<sup>79</sup> III, 16-17, 43-44.

is killed too soon after the foreshadowing for the creation of effective anticipation. His death in III comes rather as a sudden surprise, especially after his victories over Penthesilea and Memnon. The contrast with Homer here is very striking, for the fated death of Achilles is an ever-recurring theme throughout the *Iliad*.<sup>80</sup>

3) There is no foreshadowing of the outcome of any of the funeral games described in IV. Both Homer and Vergil, on the contrary, give hints of the results of several of the contests.

4) The reader has no foreknowledge of the coming of Eurypylus in VI, 119 ff., and this is especially surprising since Eurypylus plays a very prominent part in the action of VI-VIII. Moreover, Quintus here departs from his usual technique in another respect. His normal procedure is to give a forecast of a character's fate at the beginning of the episode in which that character plays a prominent part. This, we have seen, is true of Penthesilea (I), Memnon (II), Ajax (V), and Paris (X). In the case of Eurypylus, however, there is no foreshadowing of his fate until after the arrival of Neoptolemus in VII.<sup>81</sup>

5) The coming of Philoctetes is not forecast, and the advice of Calchas to withdraw from battle and await the arrival of Philoctetes (IX, 325-332) comes as a distinct surprise, all the more so as Quintus has just before described Apollo as fearing for the fate of Troy (IX, 321-323).<sup>82</sup>

6) Quintus arouses uncertainty concerning the fate of Helen by her words in X, 392-405, and there is no foreshadowing of what her fate will be. There is a hint of Menelaus' kindly attitude toward her in XIII, 404-405, but Helen remains in fear of the Greeks (XIV, 41-44) and not until XIV, 165 ff. does she, as well as the reader, learn that all will be forgiven.

<sup>80</sup> Cf. Duckworth, *op. cit.*, pp. 28-29.

<sup>81</sup> Cf. VII, 479-482, 522-525; VIII, 10-12. Cf., however, the vague prophecy of Machaon in VI, 426-428.

<sup>82</sup> The reference in V, 195-196 to Philoctetes abandoned on Lemnos is not an instance of foreshadowing, but may be considered as a preparation for the part played by Philoctetes later on in the epic. This is a good illustration of the distinction between *προαναφήνησις* and *προοικονομία*. Cf. G. E. Duckworth, "Προαναφήνησις in the Scholia to Homer," *A. J. P.*, LII (1931), pp. 323 f.



All the above are instances in which Quintus apparently rejects anticipation in favor of surprise or uncertainty. The most striking illustration of the manner in which he builds up an atmosphere of uncertainty is found in the episode of Neoptolemus and Eurypylos. I have already referred to certain curious features in the introduction of Eurypylos, and these features will be more clearly understood when considered in connection with Quintus' treatment of Neoptolemus.

The coming of Eurypylos and Neoptolemus to the war, the brave deeds of each, and their final conflict form the great central episode of the *Posthomerica*, extending through VI-VIII. Neoptolemus is Quintus' hero, and his activity serves to unify the epic from the first hints of his coming to the downfall of Troy. As Paschal says,<sup>83</sup> "Quintus has shown no little art in keeping the general interest so well centered around this son of Achilles." The prowess of Neoptolemus is nowhere better displayed than in VII and VIII. Paschal's statement<sup>84</sup> that in the person of Eurypylos "Quintus is putting up a figure for Neoptolemus to bowl over" is perhaps true, but Quintus has very cleverly attempted to conceal the fact by the unusual manner in which he has both used and failed to use the normal devices of foreshadowing. The suspense that results in this central portion of the poem is very extraordinary.

Eurypylos arrives in VI without warning and his coming is attended by great rejoicing on the part of the Trojans (VI, 124, 128-131). The poet, contrary to his usual procedure, gives no hint as to the fate of the newcomer. The delight of the Trojans and the confidence both of Eurypylos<sup>85</sup> and of Paris (VI, 298-307) seem justified, for under the leadership of Eurypylos the Trojans force back the Greeks to the shore, and only the coming of night prevents the burning of the ships. The one dismal note of foreboding occurs in the prophecy of the dying Machaon (VI, 426-428), but his words are very vague, and the poet's

<sup>83</sup> *Op. cit.*, p. 66. Paschal's statement (p. 65) that "the whole poem centers around Achilles and his son, Neoptolemus" is misleading. Achilles, who is slain early in III, can be included only in the sense that it is his spirit and courage that spur on his son.

<sup>84</sup> *Op. cit.*, p. 54.

<sup>85</sup> Cf. VI, 184. We should normally expect a *νήπιος* passage after such a boast; see above, pp. 63 f.

failure to give a definite forecast of the death of Eurypylus leaves with the reader a strong impression of the invincibility of the warrior. This impression is strengthened by the Trojan victory in VII.

The successful ἀριστεία of Eurypylus continues until, as Quintus says (VII, 165-168):

ὅλοῦ δ' Ἔρις οὐκ ἀπέληγεν,  
ἀλλ' ἔτ' ἐποτρύνεσκε θρασὺ σθένος Εὐρυπύλοιο  
ἀντιάαν δηίοισιν· ὁ δ' οὐ πω χάζετο νηῶν,  
ἀλλ' ἔμενεν Δαναοῖσι κακὴν ἐπὶ δῆριν ἀέξων.

At this exciting moment, when the Trojans are apparently on the verge of victory, Quintus suddenly shifts the scene to Scyros, where Diomedes and Odysseus entreat the youthful son of Achilles to come to their aid. The coming of Neoptolemus to the war was foreshadowed earlier in the poem,<sup>86</sup> and, at the behest of Calchas, Diomedes and Odysseus had been sent for him shortly before the arrival of Eurypylus brought renewed courage to the Trojans. In these early references to Neoptolemus Quintus refrains from giving any definite forecast of his fate. Calchas says merely (VI, 67):

“μέγα δ' ἄμμι φάος πάντεσσι πελάσσει.”

In short, the poet's failure to give any definite foreknowledge of the fate of either Neoptolemus or Eurypylus and his description of the victories of the latter and of the desperate circumstances of the Greeks create for the reader a very tense situation. Far from relieving the tension, Quintus heightens it when he turns to the scene at Scyros. I have already said that the portrayal of the emotions of the characters often arouses an element of uncertainty in the reader's mind. In this instance Quintus has already built up a background of uncertainty. Consequently, the frequent allusions to the fears of the mother of Neoptolemus that he will never return from the war but will suffer the fate of Achilles<sup>87</sup> are extremely effective in main-

<sup>86</sup> III, 118-122, 752-765; IV, 169-170.

<sup>87</sup> VII, 250-252, 268-282, 328-343. Kehmptzow (*op. cit.*, p. 32) likens the scene of Deidamia and Neoptolemus to that of Jason and his mother in *Argon.* I, 278 ff. But the scene in the *Argonautica* is much

taining the suspense. Lycomedes likewise fears for Neoptolemus (VII, 294-311) and the poet adds a final touch of suspense by his comparison of Deidamia to a swallow mourning for her lost nestlings (VII, 330-335). Here we have an instance of a simile used for the purpose of false foreshadowing—the only case of such a simile in the *Posthomeric*—and its use here reveals how Quintus is endeavoring to build up suspense and uncertainty throughout the Scyros-episode.

The tension is finally relaxed at the moment of departure (VII, 365-368):

οἱ δ' ἀνὰ ἄστυ  
εὖχοντ' ἀθανάτοισι σωσέμεν ἔσθλὸν ἄνακτα  
ἀργαλέου παλίνορσον ἀπ' Ἄρεος· οἱ δ' ἐσάκουσαν  
εὐχομένων.

This passage is the first forecast of Neoptolemus' victory and safe return,<sup>88</sup> and marks the shift from uncertainty to anticipation. From this point on, the fate of Neoptolemus is linked with that of Eurypylos, and Quintus reverts to his normal technique and heightens the reader's anticipation by his frequent allusions to the coming death of Eurypylos.<sup>89</sup> The very fact that Quintus gives this foreshadowing only after Neoptolemus joins the Greek forces shows, I believe, that the poet was withholding all such definite forecasts earlier in the episode for the express purpose of arousing uncertainty concerning the fate of his hero Neoptolemus.

Thus in VI and the first part of VII Quintus combines the reader's ignorance with the despair of the characters in such a way as to create a very effective type of uncertainty. Such uncertainty, arising partly from the foreboding of the characters, partly from the poet's failure to give the expected foreshadowing, is not found in the Homeric poems nor to such a degree in the *Argonautica*. Vergil particularly in *Aeneid* VII-XII makes use of false foreshadowing and the withholding of infor-

less protracted and the portrayal of the mother's fear does not arouse suspense in the same way; cf. I, 295-302.

<sup>88</sup> Cf. also the joy of the Nereids (VII, 353-355) and the simile of the war-god (VII, 358-364). Deidamia, however, does not have any assurance; cf. her continued grief in VII, 384-389.

<sup>89</sup> VII, 479-482, 522-525; VIII, 10-12.

mation to maintain the reader's suspense. The failure of Quintus to give foreknowledge of many parts of his poem and his desire to build up uncertainty throughout most of the Neoptolemus-Eurypylos episode are features of his technique which most resemble Vergil's departures from his predecessors.<sup>90</sup> Vergil develops uncertainty rather than anticipation in the parts of his epic where he is dealing with events that are less familiar to his readers and where presumably he is developing the tradition in his own way. Quintus, on the other hand, seeks to build up uncertainty and to withhold foreknowledge of events that had been the subject of poetic treatment from the earliest period of Greek literature.

#### V. CONCLUSION.

To summarize briefly the results of our study will perhaps help to clarify Quintus' technique of foreshadowing and suspense. His treatment of foreshadowing is in many respects unique. He uses in many episodes the technique of Homer, sometimes to excess, but he fails to make his poem a unity as is each Homeric epic. No detailed foreknowledge of the second half of the epic is given to the reader as is done by Homer in both the *Iliad* and the *Odyssey*. Although the *Posthomerica* is unified to some extent by the person of Neoptolemus and the foreshadowed fall of Troy, the poem is in many ways little more than a series of episodes, and Quintus does not connect the episodes as successfully as he might have done. At times he fails to forecast the future where the Homeric or Vergilian technique would seem to demand it. Whereas the suspense in the Homeric poems is almost entirely that of anticipation, Quintus makes much greater use of ignorance and uncertainty.

If Knight is correct in his theory of the close dependence of

<sup>90</sup> With the exception of the simile in VII, 330-335, there is in the *Posthomerica* no real false foreshadowing of the type found in the *Aeneid*. Cf. Duckworth, *Foreshadowing and Suspense*, etc., pp. 109-115. I do not mean by false foreshadowing the use of the characters' emotions to arouse uncertainty concerning the future, but a deliberate attempt on the part of the poet to mislead the reader. There are no true instances of false foreshadowing in either the Homeric poems or the *Argonautica*. Cf. W. Schmid in *Gnomon*, X (1934), p. 168. See also S. E. Bassett, "The Fate of the Phaeacians," *Class. Phil.*, XXVIII (1933), pp. 305-307.

Quintus upon his source, then we must assume that the characteristics of the *Posthomericæ* under discussion go back to a much earlier period. The episodic nature of Quintus' technique may to some extent be due to his loosely connected subject matter. The Cyclic epics were episodic in character, but it seems unlikely that they differed from the Homeric technique in their use of suspense and foreshadowing so strikingly that we are justified in considering them as Quintus' model in this respect. Moreover, it is very doubtful if the Cyclic epics were in existence in the time of Quintus.<sup>91</sup> A Hellenistic source, on the other hand, might have displayed such a technique. The *Argonautica* of Apollonius shows a greater development of the use of uncertainty and, in the description of the homeward voyage in IV, an episodic use of foreshadowing not unlike that found in the *Posthomericæ*. It is possible, therefore, that Quintus' poem reflects to some extent the Greek development of the epic and a shift of emphasis from anticipation to uncertainty; but the many significant features of Quintus' technique make it difficult to believe that any Hellenistic epic could have used foreshadowing and suspense in quite the same way. It seems unwise, therefore, to assume too close a correspondence between the *Posthomericæ* and its Greek source or sources.

The problem is somewhat clarified by the form and technique of the *Aeneid*. Vergil, as I have said, differs from his predecessors in his use of foreshadowing and suspense. Many of Vergil's departures from the technique of the earlier poets are found also in the *Posthomericæ*. Much of Quintus' foreshadowing has a vagueness which is paralleled by that in the *Aeneid*, and many of the vague forecasts call to mind similar Vergilian passages.<sup>92</sup> The passage in which Quintus makes the greatest use of anticipation and irony, his description of the entrance of the wooden horse into the city, closely resembles the passage on the same theme in *Aeneid* II, where Vergil creates greater anticipation

<sup>91</sup> Cf. e. g., Kroll, *op. cit.*, pp. 161 f.; Paschal, *op. cit.*, pp. 68 ff.; Christ-Schmid, *op. cit.*, p. 963, n. 8.

<sup>92</sup> Cf., e. g., *Posthom.* II, 167-172 (the prophecy of Zeus to the assembled gods) with *Aen.* X, 107-113; *Posthom.* VI, 426-428 (the last words of Machaon) with *Aen.* X, 739-741; *Posthom.* XIV, 381-382 (the reference to the prayers of the Greeks as scattered by the winds) with *Aen.* IX, 312-313.



and foreboding than in any other part of his epic, with the possible exception of the Dido episode. Moreover, Quintus' frequent references to the fated downfall of the city and to the trickery of the Greeks are difficult to explain if we assume that Quintus was using merely Greek sources and was not indebted to Vergil. It seems much better to accept the dependence of Quintus upon Vergil than to overthrow the accepted theory of Vergil's innovations in his treatment of the Greeks and the Trojans in *Aeneid* II.<sup>93</sup> Finally, it is only in the *Aeneid* that we find parallels to Quintus' development of suspense of uncertainty and to his failure to give foreknowledge of many events.

Although these similarities between Vergil and Quintus do not enable us to assert conclusively that Quintus was imitating Vergil, the cumulative value of such similarities is considerable, and they must be looked upon as supplementary evidence for the dependence of Quintus upon Vergil which has been maintained by Kehmptzow, Noack, Paschal, Becker, Schmid, and Keydell. To explain the parallel features of technique as the result of the use by Vergil and Quintus of a common source seems rather precarious in view of the absence of such features from the earlier Greek epics which are still extant. That the innovations in foreshadowing and suspense were made by Vergil, a master of epic technique, appears more likely than that they were developed by an unknown and unnamed Greek poet. If this is the case, we should be less hesitant to admit that the *Aeneid* may well have played a prominent part among the sources which Quintus used in the composition of his *Posthomerica*.

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<sup>93</sup> The account of Tryphiodorus likewise shows similarities of tone and technique that are difficult to explain unless we assume that he too had knowledge of the Roman poet. Cf. also F. Noack, "Die Quellen des Tryphiodoros," *Herm.*, XXVII (1892), pp. 452-463; E. Cesareo, "Trifiodoro e l'Iliupersis di Virgilio," *St. ital. di Fil. cl.*, VI (1928), pp. 231-300; "Qua ratione Tryphiodorus Vergili Nyctomachian, necem Priami, nonnullos praeterea locos imitatione prosecutus sit," *St. ital. di Fil. cl.*, VII (1929), pp. 265-304.



## ON THE EXPORT TAX OF SPANISH HARBORS.

In 1899 Dressel published in *C. I. L.*, XV, 2 the inscriptions of the fragmentary jars found up to that time at Monte Testaccio at Rome. It will be remembered that on the body of most of the jars there appear in large script two numbers and a name (that of the shipper-owner, as I believe). Below the handle there is also a roughly inscribed number (designated by the letter  $\epsilon$  in Dressel's report). Then near the handle, written diagonally in small cursives, appear various items usually including, when the inscription is complete, the name of the slave who received the jar at the port of shipment, the consular date, the name of the port, the weight of the contents of the jar (usually from 180 to 220 Roman pounds), a number that repeats the one designated above as  $\epsilon$  and that seems to be the number of the jar in a given consignment, the name of the estate from which the product came (or its owner or renter or manager), the name of the weighing clerk, and (what I wish to discuss here) a symbol, not yet interpreted, which looks like *áá* (sometimes with additions).

Very few of these fragmentary inscriptions have all these items still legible. Only about 300 have retained more than one or two. About 90 of these 300 have the symbol which I have just mentioned. Of these, 72 have *áá*, 5 have *áás*-, 2 have *áás*=, 7 have *ááís*, 6 have *ááá*, 1 has *áááá*. I wish to point out that these symbols seem to indicate the export tax in *asses*. Since the jars, according to their inscriptions, usually held about  $2\frac{1}{2}$  standard amphorae of wine or oil<sup>1</sup> and since Columella (III, 3, 8) gives the wholesale price of ordinary wine in Italy as about 15 sesterces the amphora—and Spanish wine doubtless cost less,<sup>2</sup>

<sup>1</sup> Rostovtzeff (art. "Frumentum" in Pauly-Wissowa, VII, 139) thinks that many jars contained grain. I hesitate to believe that grain (which could be carried in light bags or in bulk) would be shipped in jars that would add something like 40 tons to the shipload. Furthermore, the weight of the contents (from 180 to 220 Roman lbs.) would suit oil or wine but would be too high for grain.

<sup>2</sup> See Polybius 34, 8, 7-10 for the extremely low prices of Spanish wine and oil in Cato's day. Martial (XII, 76) mentions the poverty of

<sup>4</sup> For the abbreviation of plurals by repetition of the initial letter (e.g. *ff.* for *duo filii*, etc.) see Dessau, *I. L. S.*, III, p. 796.

The number that I take for the value is followed by *s* in some twenty instances, so that it can hardly be the number of the jar in the consignment. Furthermore in no. 3856 the number of the jar (indicated by Dressel under the letter *ε*) is IV, and in 4243 it is IX. In such cases the number *xx* cannot be the number of the jar. In one instance (3884) the value seems to be *xxv* and the tax *áá*. If this reading is correct, the jar may have held some article on which the export tax was only 2%. Special rates were in some places recorded for special articles.

There is further confirmation of my interpretation in the fact that the jars belonging to the *Fiscus* (nos. 4094-4142) do not have the symbol, presumably because imperial exports paid no duty.

Mommsen conjectured that the export tax in Spain was 2%, but he admitted that the inscription on which he based this guess (*C. I. L.*, II, 5064) is not explicit. I am inclined to think that the export tax of Spain was 2½% as in Gaul and Asia, since Spain is the exporter in all the 190 instances where the port is mentioned on Dressel's jars. Of the nine jars that I have mentioned above as showing a tax of 2½%, nos. 3856, 3886, 4016, and 4366 seem, because of the names, to be from Spain. This suggestion that the Spanish export tax was 2½% receives support from an Ostian inscription to which Dr. Van Nostrand calls my attention. It has the phrase *xxxx G[alliar] et Hispaniar* (*Not. Scav.* 1923, p. 399).

Now this matter may seem of trifling importance, but anyone who has read Hirschfeld's *Verwaltungsbeamten*, p. 141 (a paragraph based on the conjectures of Dressel and on Rostovtzeff's *Staatspacht*, 426-32) will remember that very large inferences have been drawn from these inscriptions. It has been assumed that the jars contained in the main the products of the public and imperial estates in Spain, and that such estates, though seldom mentioned elsewhere, must have been very considerable (see also Rostovtzeff, *SEHRE*, pp. 199-201 and 533, note 22). But if most of these jars record an export tax, the generally accepted conclusions cannot be correct, for the state did not pay itself an export duty on its own products. My conclusion is that practically all of this trade, represented by a score of millions of jars, was—up to 217 A. D.—in private hands and carried pri-

vately produced oil and wine.<sup>5</sup> Later, in discussing Roman trade, I shall attempt a fuller statement of the economic significance of these inscriptions.

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<sup>5</sup> In nos. 4092-4142, Dressel published the jars of 217 A. D. and after, marked *Fisci rationis patrimonii prov. Baeticae*. Here of course both production and trade are imperial, for Septimius Severus had confiscated vast domains in Spain a few years before (*Vita Severi*, 12, 3), and in these inscriptions our symbol *áá* does not occur for the simple reason that no export tax was paid on fiscal goods.

## REVIEWS.

A Third Century Papyrus Codex of the Epistles of St. Paul, edited by HENRY A. SANDERS. University of Michigan Studies, Humanistic Series, Vol. XXXVIII. Ann Arbor, 1935. \$3.00.

The Chester Beatty collection of early Biblical papyri, as it was made known to the world in the autumn of 1931, included ten imperfect leaves of what had evidently been a codex containing at any rate the greater part of the Pauline Epistles. The text of these was published by the present writer as fasciculus III of *The Chester Beatty Biblical Papyri* in March, 1934. But this publication had hardly seen the light when it became known that a far more important section of the same manuscript had been acquired by the University of Michigan, in addition to smaller portions of other MSS included in the Chester Beatty find. Six leaves were acquired in 1930-31, and 24 more in 1932-33; and these thirty leaves, together with a reprint of the ten Beatty leaves, have now been published by Professor H. A. Sanders, with a full introduction, a discussion of certain selected passages, and a collation with the *textus receptus*.

The thirty Michigan leaves, which are in far better preservation than most of the Beatty leaves, confirm and amplify certain deductions which had been tentatively put forward in the edition of the latter. From the remains of a page-numeration it had been deduced that the codex had originally been a single-quire volume of 100-104 leaves, and that the Epistle to the Hebrews had probably been included somewhere between Romans and Philippians; also that there was not room for the Pastoral Epistles, though there seemed to have been four or five leaves at the end (after 2 Thessalonians) which could not be accounted for, unless they were left blank. The Michigan leaves prove that the Codex consisted of 104 leaves, and that Hebrews followed immediately after Romans, a position only found (according to Professor Sanders, following Tischendorf) in one other MS, the minuscule formerly known as Paul 100 and now as 1919. They do not solve the problem of the contents (if any) of the final leaves.

The Michigan leaves are a magnificent addition to the original discovery, and are sufficient to give the MS a position of outstanding importance for the textual criticism of the Pauline Epistles. They are most adequately edited by Professor Sanders, whose introduction, besides giving full palaeographical particulars, includes an interesting discussion of the character of the text. They do not, however, complete the story. Professor Sanders had already pointed out that, in addition to leaves

missing at the beginning and end, there were three large gaps, amounting in all to forty-five leaves, which it might reasonably be hoped might still be in the possession of the original finders or dealers. This hope has been promptly fulfilled; for Mr. Chester Beatty has now authorised the announcement that he has acquired forty-six more leaves, in as good condition as the Michigan portion, and these have been placed in the hands of the present writer for examination and publication. We therefore now have no less than 86 leaves out of the original total of 104—in short, an almost complete manuscript of the Pauline Epistles, perhaps a century earlier than the earliest copy hitherto known.

We are now in a position to review our whole acquisition. It is a papyrus codex, originally of 104 leaves, formed in a single quire. Leaves 1-7 are missing from the beginning, and correspondingly leaves 98-104 from the end. Also leaves 9 and 10 are missing near the beginning, and correspondingly leaves 95 and 96 near the end. Otherwise every leaf is represented, though all are more or less mutilated; for a large part of the MS the loss amounts to no more than two to four lines (out of a total of from 25 to 31) at the bottom of each leaf. The order of the Epistles is Romans, Hebrews, 1 and 2 Corinthians, Ephesians, Galatians, Philippians, Colossians, 1 Thessalonians. The MS in its present state breaks off a few words before the end of 1 Thessalonians, and the seven leaves missing at the end would have sufficed for 2 Thessalonians, with nearly five leaves to spare. Professor Sanders had calculated that there would be space for Philemon between Galatians and Philippians, but the new Beatty leaves prove that this is not the case. There would be more than enough room for Philemon at the end, but not for Timothy and Titus. Professor Sanders thinks that 1 and 2 Timothy may have been included in an abbreviated form (or rather in an original shorter form, of which our present Epistles are an expansion); but there is no sort of confirmation of the existence of such a form, and it is hard to believe that no trace of it would have survived, if it ever existed.

The date assigned to the MS in the original publication of the Beatty leaves was the first half of the third century. Professor Sanders would place it later in the century, since he regards it as younger than the second Genesis MS, which, as he says, belongs surely to the second half of the third century. His main criterion appears to be that the more complete MSS in the find are probably later than the less complete. This seems a wholly insecure basis; when only the ten Beatty leaves were known, it would have placed them among the earliest of the find, whereas now it would place them among the latest. On the other hand, Professor Ulrich Wilcken, the most experienced



living papyrologist, would on palaeographical grounds put this MS quite at the beginning of the century, or perhaps even in the second; "about A. D. 200" he considers to be the safest date to assign to it. Exactitude is impossible in such matters; but I think the first half of the third century may be accepted without misgiving, and this is confirmed by the cursive subscriptions which give the number of *stichoi* in each Epistle.

These subscriptions are a detail of some interest. Not all are preserved, but they give the following figures:

Romans	1,000
Hebrews	700
1 Corinthians	lost
2 Corinthians	uncertain (Sanders reads 1,000, which cannot be correct; on a photograph 600 seems possible, perhaps with an additional figure).
Ephesians	316
Galatians	375
Philippians	225.

The remainder are lost, but a small detached fragment has the words  $\sigma\tau\iota\chi\ \rho$  [.], which probably relates to Colossians. Professor Sanders remarks that the numbers are regularly higher than those elsewhere recorded, but this is not the case. They correspond very nearly with (and are in some cases lower than) those of the well-known Codex Claromontanus (Romans 1040, 1 Cor. 1060, 2 Cor. [-]70, Gal. 350, Eph. 375, Col. 251; Philippians and Thessalonians are omitted, also Hebrews, unless it is identical with the 'Epistle of Barnabas' which appears in the list with the number 850). They also appear to correspond pretty closely with the normal calculation of 36 letters to a  $\sigma\tau\iota\chi\oslash\varsigma$ .

It should be observed that Professor Sanders' calculations with regard to the amount of text in the missing portions of the MS are vitiated by an error on the part of the scribe who numbered the pages, which he could not possibly have foreseen. Between the pages numbered 100 and 101, two pages (one opening of the book) have escaped numeration, so that all the page-numbers thereafter are lower by two than they should be. This is an example of the pitfalls which beset the path of statisticians, and a warning to those who, like myself, have indulged in such calculations, not to build too confidently on them.

With regard to the text of the Codex, especial interest attaches to one reading, to which Professor Sanders naturally calls attention. The doxology at the end of Romans (XVI, 25-27) has been the subject of much controversy. All the earliest MSS, with the Vulgate, Peshitta, and Bohairic versions, have it at the end of the Epistle; but the great majority of the minuscules place it at the end of Ch. XIV. The Alexandrinus and a few

other MSS have it in both places. The doubt goes back to a very early date, for Origen mentions it, and (on the ordinary interpretation of his words as reported by Rufinus) adds that Marcion deleted the whole of Chapters XV and XVI from the Epistle. Hence some have supposed that these chapters formed no original part of it, and have argued that Ch. XV belongs to another letter to the Romans, while Ch. XVI (with its long list of greetings to individuals, which are held to be unlikely in a letter to a church which the apostle had never visited) is supposed to be a brief letter introducing 'our sister Phoebe' to the church at Ephesus. Now XV is not easily separable from XIV, since it continues to deal with the same subject, but XVI is in any case of the nature of a postscript. Hence it is very remarkable to find that our papyrus inserts the doxology at the end of XV, following on with the text of XVI without a break, and ending it without any final formula. Professor Sanders would accept this as a proof that the epistle originally ended at XV, and that XVI is a separate letter; a conclusion to which Gregory would have liked to come if there had been any MS evidence of a break at the end of XV. Unsupported by any MS, version or Father, this seems a questionable conclusion, and still leaves the difficulty of understanding how the letter of introduction for Phoebe came to be attached (without preface or conclusion) to the great epistle to the Romans. It is perhaps more probable that the doxology was moved to the end of XV (and by others to the end of XIV) so as to be read in church in connection with the main epistle, rather than with a long series of personal salutations.

In general, the papyrus agrees far more often with the Vaticanus than with any other MS. This, which was indicated in the first ten Beatty leaves, is confirmed by the figures given by Professor Sanders for the Michigan leaves, and also by a first examination of the new Beatty portion. It is also uniformly so throughout (for Hebrews the evidence is incomplete, since the Vaticanus is largely defective here), though the proportions may vary a little in the several books. At the same time the papyrus shows an appreciable number of agreements with the Western group (DFG) as against the Alexandrian (B<sup>h</sup>AC): though the preponderance is decidedly on the other side. Thus in Romans, in 140 passages where the Alexandrian and Western readings are definitely different (though one or other MS may occasionally be found on the other side), the papyrus associates with the Alexandrian reading in 90 cases, and with the Western in 50. In the other Epistles the Alexandrian preponderance is greater. Such figures are sufficient to show that the text of the papyrus is by no means exclusively Alexandrian. Rather (if provisional conclusions may be offered on a first superficial ex-

amination of the evidence), they would seem to confirm the view to which the discoveries and studies of the last generation generally point, viz. that in the third century the families which Westcott and Hort labelled Neutral (Alexandrian) and Western were not yet fully formed; that readings which eventually found their home in one or other of these families were promiscuously in circulation in Egypt; that both Alexandrian and Western texts are the result of editorial selection, not of uncontaminated descent from the originals; and that if the general superiority is on the side of the Alexandrian, it is not an exclusive superiority, but that full consideration must often be given to the readings of its rival.

It is perhaps too soon to say even so much. It is certainly too soon to be dogmatic. A fuller and more detailed examination of the evidence is necessary, in which the character of individual readings will be scrutinised, instead of being merely arranged in numerical statistics. Readings must be weighed as well as counted before a final appreciation of the new witness can be arrived at. Meanwhile it is incumbent on us to congratulate Professor Sanders on his achievement, and to thank him for the clear and convenient manner in which the evidence has been set out. But in addition I am especially bound to thank both him and the authorities of the University of Michigan for the generosity with which they spontaneously offered to allow their portion of the Codex to be reprinted in the forthcoming complete edition (already in the printer's hands) of all that Egypt has brought to light of this, the earliest known manuscript of the Epistles of St. Paul.

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Dizionario dei Nomi Geografici e Topografici dell' Egitto Greco-Romano, compiled by ARISTIDE CALDERINI. Vol. I, fasc. 1. Cairo, Società Reale di Geografia d'Egitto, 1935. Pp. xii + 216.

The project of compiling a dictionary of all the geographic and topographic names in Greek and Latin which appear in connection with Egypt under Ptolemaic and Roman rule was first advanced by Professor Calderini at the International Congress of Geographers held at Cairo in 1925. Statements of the progress of the work appeared later in *Aegyptus* XI (1930-1931), pp. 10 ff., and in 1934 in *Münchener Beiträge zur Papyrusforschung*, XIX, pp. 400 ff. The chronological span to be covered is from about 300 B. C. to about 1000 A. D. The first fascicle of volume I, which now appears, actually begins with the word *ααλαβιν*, the name of a *τόπος* met only in an eighth century papyrus, and

ends with 'Αλικαρνασσεύς, which, so far as the Greek records dealing with Egypt are concerned, is first found in a Zenon papyrus of 257 B. C. The scope of this project which Calderini has undertaken may be best illustrated by citing the fact that the references to the city and district of Alexandria alone, with the necessary discussion connected with them, occupy 154 pages of the 216 pages of the first part of this volume. Professor Calderini has certainly been justified in including the place names of the Red Sea coast, of the western shores of the Indian Ocean, the Sahara desert, and the Cyrene district within the geographic scope of his work.

In undertaking this laborious and exacting task the eminent Italian scholar will have earned the gratitude of all who are interested in the Greek and Latin papyri from Egypt. For this group the *Dizionario* will be an essential book of constant reference. Up to the present the only lists available upon place-names and the locations of towns, villages, demes, streets, and the like have been in the studies of the late Karl Wessely upon the Fayum; in the introduction of Grenfell and Hunt to their volume of Fayum papyri, and the places listed in an appendix to volume II of their Tebtunis papyri; and in the lists of buildings, of phyles and demes and in the names of the Geographic Index in volume III of Friedrich Preisigke's *Wörterbuch*. Otherwise one who works in the papyri is constrained to undergo the time-consuming task of checking his geographic names in the indices of all the published papyri and ostraca. Even the most recent of the lists cited above, that in Preisigke's *Wörterbuch*, useful as it has been in the absence of a special study of the kind now becoming available, has been meagre and unsatisfactory as judged by the high standards of accuracy and completeness exhibited in this first section of Calderini's dictionary. As compared, for example, with about 108 items in the indices of buildings, of phyles and demes, and of ethnic adjectives and geographic names covered under "A to 'Αλικαρνασσεύς" in the third volume of Preisigke, Calderini's list shows about 275 items, with the addition of 200 separate designations of localities under "Alexandria" alone. It is clear that a new basis is here laid for the important problem of the archaeological history of the city of Alexandria.

Actually the work of Calderini, as amply indicated in respect to Alexandria, goes far beyond the requirements of papyrologists alone. Under each item he has included the etymology of the name, as reported by ancient authors, the geographic localization, references upon the history of the locality, upon local topography and the character of the populations, names of the magistracies which appear in each place, the agricultural and industrial production which can be found in connection with each item, and

the professions and businesses which appear in the sources in connection with each city, town, or village. The *Dizionario*, therefore, will also be an indispensable guide to geographers, economists, and students of the political organization of Greco-Roman Egypt. The specific information which may be obtained from ancient authors regarding the populations of the various cities or towns, where such information is available, will be of great value to sociologists as well as to historians of antiquity. The method of presentation of the various types of references under each name meets the essential requirements of clear and simple arrangement and availability for practical use.

The reference to the gymnasium in Alexandria which occurs in Papiri Fiorentini 382, 15-16 should be included under Γυμνάσιον on p. 107 and the addition made of the Πυλόν, the entrance gate to the gymnasium, which appears there. A reference to a Στοά situated in the gymnasium at Alexandria may be called to the editor's attention for possible inclusion under the Addenda. It occurs in Columbia Papyrus, Inventory No. 516 (unpublished) where it is cited as the place of publication of numerous rescripta of Septimius Severus of the year 200 A. D. The discussion of Acoris by R. Weill and Pierre Jouguet, on pp. 86-7 of vol. LXVII of the *Mémoires de l'Inst. fran. de Caire*, undoubtedly came too late for inclusion in the references upon that city. Under Ἀγοραί a new reference, also too recent for inclusion, to Wilbour Ostrakon 62 (Claire Préaux, *Les Ostraca Grecs de la Collection Charles-Edwin Wilbour*, Brooklyn Museum, 1935) will no doubt be taken up in the Addenda.

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GEORGE DEPUE HADZSITS. *Lucretius and his Influence*. New York, Longmans Green and Co., 1935. 367 pp. \$2.25.

It is not easy to say anything new about Lucretius without entering, as some writers have done lately, into the realms of pure speculation. Professor Hadzsits has kept cautiously within the region of the known, but yet has produced a study which is always spirited, often illuminating and occasionally provocative. As one would expect from one of the Editors of the series *Our Debt to Greece and Rome*, he has held the purpose of the series more constantly before his mind than some of his contributors, and the whole of the last part of the book in which Lucretius' influence is traced is of great interest and value. We see there how Roman writers, while admiring Lucretius as a poet, paid little or no attention to him as an authority on Epicureanism, how the Church banned him as an 'atheist,' how when Poggio



rediscovered the text in the 15th century, he was again looked on as a poet rather than a philosopher, and how, although atomism was not taken seriously till the days of Gassendi, Boyle and Newton, it has become the foundation of modern chemistry and Lucretius has come to his own again as a thinker. All this has involved an immense amount of research and Dr. Hadzsits' results are presented with a light touch which converts his record into a fascinating story.

In the chapters which deal with Lucretius himself and the *De Rerum Natura* Dr. Hadzsits is a little carried away by his enthusiastic devotion to Lucretius and is perhaps too ready to read modern ideas into him. While admitting that we know almost nothing of his life, he not only sweeps away recent speculations, but even Jerome's statement about his insanity and suicide as unworthy of so great a personage. And in his exposition of Lucretius' philosophy, though on the whole it is sound and cautious, there are occasions when Dr. Hadzsits gives us a dangerous lead. The doctrine of the *minimae partes* (i. 599-634) has, I feel sure, nothing to do with the modern idea of the molecule (p. 71); it is clear from the history of the atomic theory before Epicurus that all that Epicurus and Lucretius were trying to say was that, though the atom is incredibly small, it yet has extension, and is not a mathematical 'point'. Again, though Dr. Hadzsits rightly insists that Lucretius, while denying providence, believed in the existence of the gods and held that some sort of communion with them was possible (vi. 68 ff.), there is very little evidence that he wished to set up this idea as a new religious Gospel; this is too modern a notion. Still less can we accept the view (p. 116) that he wished to justify participation in the normal ritual of worship on this esoteric ground; this depends on what to my mind is a very serious mistranslation of v 1203 (p. 223). Dr. Hadzsits appears to me too to exaggerate Lucretius' independence of his master; though he naturally looked on Epicureanism with Roman eyes, he intended to be true to Epicurus' precepts and had no deliberate desire to be rid of Epicurus' doctrine of selfishness (p. 127, n. 2) and substitute a Roman conception of strength of character.

There are other points of detail to which exception might be taken, but all lovers of Lucretius will be grateful to Dr. Hadzsits not only for his brilliant sketch of Lucretius' influence through the ages, but for a study of his doctrine which will often make them pause and rethink their own previous conclusions.

CYRIL BAILEY.



CYRIL BAILEY. *Religion in Virgil*. Oxford, The Clarendon Press, 1935. Pp. 337. \$5.00.

Mr. Bailey has given us in this book a most valuable supplement to his *Phases in the Religion of Ancient Rome*, the Sather Classical Lectures for 1932. One gets an idea from critics like Conington that Virgil's mind was cluttered with a tangled mass of beliefs, superstitions, and philosophical doctrines which naturally work confusion as he endeavors to express them in his poetry. All is now clear, however, in the light of Mr. Bailey's careful treatment.

The topics that he examines in successive chapters are: "Magic, Omen and Prophecy," "The Old Italian Religion—Words and Ideas," "The State Cult," "The Greco-Roman Gods," "Oriental Gods—Cosmological Gods—The Worship of the Emperor," "Fate and the Gods," "The Dead and the Underworld." In each case we are presented with everything in Virgil's poetry that has any bearing on the subject. Each statement is supported by a reference. There are many citations in the notes from the original and translations are often given in the text. The reader may be sure that the entire mass of evidence is before him. He feels that he is reading not merely a pleasant essay on the various subjects—though the skilful presentation is pleasant to read—but a strict account of "what Virgil said."

Virgil is allowed to speak, quite properly, only in the universally accepted poems. Of the poems of the "appendix" the *Culex* is found to contain matter in harmony with Virgil, but the question of the authorship of the minor poems is kept discreetly in the background. It might well be profitable to examine them anew with reference to the clear results obtained by Mr. Bailey in the present work.

The exact analyses of words like *religio*, *pietas*, and *fatum* suggest that the same method might be profitably applied to other Roman poets, particularly Ovid. *Fatum* is found with the help of Servius to be equivalent sometimes to *voluntas Iovis*. I wonder whether that note is not sounded in the very beginning of the *Aeneid* in the phrase *fato profugus*, which in that case might well be a glance at Homer's

Διὸς δ' ἐτελείετο βουλή.

Very skilful, among other things, is the portrayal of the world of the gods. Virgil is not merely adopting a traditional device which he applies somewhat mechanically. The gods have a real reason for existence in the entire scheme of fate and its relation to mortal men that Mr. Bailey discovered in Virgil. Only one element does he miss—the delicate tinge of humor in some of

the divine scenes, notably the interchange of diplomacy between Venus and Juno over the affair at Carthage. Virgil is fully capable of staging this part of his story in comedy, though he shrinks from the audacities of either Ovid or Homer.

In a final chapter Mr. Bailey does indeed give us a pleasant essay that one reads with a double interest after the preceding demonstrations. Mr. Bailey illustrates the method conspicuous in his own Lucretius of allowing a general vista of ideas only to one who has climbed the hill. The essence of Virgil's own religious faith now lies before us and it is found in the famous Apocalypse at the Sixth Book of the *Aeneid*. His ultimate outlook is neither Epicurean nor Stoic, though to neither of these points of view is he hostile. It is rather to Plato and Pythagoras that he looks for counsel after wrestling with the problems of life for years. It is easy to retort that the scene in Elysium is merely the product of dramatic necessity. Virgil wishes to connect his mythical narrative with the events of the present day. The theological theory of rebirth is at his disposal; the long line of Roman heroes may be pictured in the other world ready to step out into this at the appropriate moment. Very skilful! Skilful indeed, but not for that reason untrue to the poet's deepest feeling. Of course, it would be dangerous to look for philosophical dogma here or to outline its parts. Virgil has the mind of a poet, not that of the maker of one of our little systems.

In presenting the religion of Virgil, Mr. Bailey, without a word of proclamation, has done something even more important still. He has shown what Roman religion in general must have meant to the best minds of Virgil's own day. He has relieved it of the charge of a mere mechanistic formality which is generally brought against it. He shows it as a religion of both depth and color, like the Catholic faith. He shows how native rites are blended with Greek, and even to some extent with Oriental, cults into a unity effected by a poetic mind. Furthermore the mind of Virgil that mirrors for us the mind of Rome gives prophecy also of the Christian religion of peace through suffering. Tertullian was not thinking primarily of Virgil in his famous phrase, but none among the pagans may more appropriately than he be called an *anima naturaliter Christiana*.

I cannot refrain from quoting the noble paragraph with which the book ends:

"The Church of the Middle Ages greeted Virgil as the prophet of Christ, and Dante made him his guide through the world of departed souls. These recognitions of his religious worth were based no doubt on the apparently Messianic character of the fourth *Eclogue* and on the description of the after-world in the sixth book of the *Aeneid*. But the truth in fact lay deeper,

for Virgil, the philosopher and the poet, as he looked on life and tried to interpret it, had probed something of the secret which lay at the heart of Christianity."

E. K. RAND.

HARVARD UNIVERSITY.

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ARISTOTLE. *The Physics*, with an English Translation by PHILIP H. WICKSTEED and FRANCIS M. CORNFORD. Volume II (Books V-VIII). The Loeb Classical Library. Cambridge, The Harvard University Press, 1934. Pp. viii + 440.

Professor Cornford's task in this volume must have been even more arduous than it was in the revision and completion of the first four books of Dr. Wicksteed's translation of the *Physics*, for Books V and VII had apparently received only slight attention from Dr. Wicksteed, while Professor Cornford's notes on Book VIII show that he considered it necessary to rework the translation and alter the interpretation at every step. Dr. Wicksteed had felt that the inclusion of the Greek text justified him in giving an "interpretative paraphrase" rather than a translation. He would, therefore, himself have warned the reader against using his English as a substitute for the Greek; but, interesting as his method of paraphrase is, the discrepancies between the English and the Greek constantly distract the attention of the reader from the meaning of Aristotle's words to the secondary puzzle of the origin and rationale of the interpretation itself. This "freedom" of the paraphrase must have increased considerably the natural difficulties of Professor Cornford's task; it has forced him to add copious notes in which are given "more literal" translations which usually vary substantially from the meaning of Dr. Wicksteed's renderings, and readers should notice that in such cases the version in the notes is the one to be followed. Sometimes Professor Cornford's reticence has caused him to allow a positive error to stand in the translation, although in his own note the correct rendering is given (e. g. 249 A 1: *καὶ ἔσται τὰὐτὸν ἴσον κ.τ.λ.* and 267 A 20: *νῦν δὲ φαίνεται κ.τ.λ.*). The notes offer more, however, than such corrections; they contain much helpful exegetical material which will make the book of real service to students of Aristotle.

HAROLD CHERNISS.

THE JOHNS HOPKINS UNIVERSITY.

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- D. DR. OTTO STÄHLIN. Clemens Alexandrinus: Register. (Die Griechischen Christlichen Schriftsteller der ersten drei Jahrhunderte. Band 39, 1.) Leipzig, 1934. Pp. 196.

Stählin's monumental work on Clement (the text, preceded by several preliminary studies, in vols. 12, 15, and 17 of this same series [1905-1909]; and a translation of the principal works other than the *Stromateis*, in two volumes, with admirable introduction, notes, and indices [1934]) is auspiciously drawing to a close after more than 40 years. This, the first part of the elaborate indices which are to be in three fascicles, includes the citations and testimonia (where the exact quotations are conveniently indicated by italic numerals), the initial words of the fragments, and an elaborately classified summary of statement regarding the 1700 or more proper nouns in Clement's writings.

As was to be expected of the author of the useful *Editionstechnik* (second edition, 1914), the work is done with admirable attention to convenience and lucidity and with an astonishing accuracy; this latter point I tested extensively at several different places and the references were always correctly given. Like Leisegang's fine indices to the Cohn-Wendland Philo these even more elaborate ones by Stählin will be indispensable for scholarly work with Clement, and especially so because they contain a good deal of new material not in the original three volumes of text (e. g. references to the second edition of Resch's *Agrapha*, which was not yet available for the first two volumes, and the like). A world of patient and sagacious study has gone into the preparation of this fascicle, bringing it down quite to date, despite the fact that the first draft was almost complete as much as 25 years ago. It is to be hoped that the publication of the second and third fascicles, which are to contain the *index verborum* and the *index rerum*, will not be long delayed.

A point or two of technique, which the master of technique might not be unwilling to see queried, or at least discussed, occur to me. One is the use of Roman numerals. Nothing the Romans ever made or did was less creditable to them than their system of numerical (and fractional) designation, with the possible exception of their preposterous calendar. By continuing to employ it, except under highly special circumstances, we do their memory no credit, and for ourselves mostly waste space and create unnecessary trouble. I venture to suggest, furthermore, that the traditional order of books in the Bible might well be abandoned, especially for the Old Testament, where several variations in that order exist, in favor of the strictly alphabetical one. *Malechi* before *Isaiah*, and *Baruch* between *Jere-*

*miah* and the *Lamentations*, represent an arrangement with which not everyone, I dare say, is semi-automatically familiar. In general I should plead for Arabic numerals and alphabetical order practically everywhere. I am inclined to think, also, that comment upon the form and meaning of a name (as for Moses) might be a little more naturally looked for at the very beginning of an article rather than in the body or at the end.—But these are the merest trifles, even in my own eyes, and some might not agree with the views just expressed. In any event we have here a masterpiece of helpfully arranged material for which scholars will always be grateful.

W. A. OLDFATHER.

THE UNIVERSITY OF ILLINOIS.

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H. IDRIS BELL and T. C. SKEAT. *Fragments of an Unknown Gospel and Other Early Christian Papyri*. London, published by the Trustees of the British Museum, 1935. Pp. vii + 63, Plates V. Price, 4 shillings.

The contents of this volume rank high in importance among the many brilliant discoveries among papyri in recent years. It contains (1) a fragment of an otherwise unknown gospel on three leaves, dated in the middle of the second century, (2) fragments of a theological and exegetical work of unknown authorship in a codex of the early third century, (3) a damaged leaf from a third century manuscript of *Chronicles* (Rahlfs 971), containing remnants of 2 Chron., 24, 17-27, and (4) a single leaf from a liturgical book of the fourth or fifth century. The text of the second item is extremely corrupt, so that neither its literary form nor its theological character can be made out with certainty. The verses from *Chronicles* follow in the main the text of B and A. The prayer is one of a numbered collection and may have formed part of an early liturgy which did not survive the great reforms. No review can do justice to the care with which these documents have been edited or to the copious and lucid diplomatic and philological discussions which accompany them. These the reader will discover and value for himself.

By far the most important piece in the collection is the gospel fragment. The text is brief and corrupt but its reconstruction has been managed with such ingenuity and discretion that most of it can be read with confidence. It contains five incidents in the life of Jesus, four of which have parallels in the canonical gospels. In these four a connection with the Fourth Gospel is certain and a knowledge of one or more of the Synoptics is extremely likely. The editors with caution and reserve are in-



clined to believe that the Unknown Gospel is not a dependent of John but is one, or a derivative of one, of its sources and that the affinities with the Synoptic tradition suggest an acquaintance with it in a more fluid and primitive form than that represented by Matthew, Mark, and Luke. If this were so, the papyrus would enable us to tap the two main lines of gospel narrative at a point earlier than the composition of the canonical gospels and to see with our own eyes the materials with which they worked. This possibility is of such sensational importance for the criticism of the Gospels that an examination of the Unknown Gospel and its parallels with the canonical four appears desirable, but it should be said at the outset that textual comparison proves in no way favourable to the priority of the papyrus fragment.

The first incident involves a dispute between Jesus and the 'lawyers' in which Jesus speaks to them in two sentences closely parallel to Jo. 5, 39 and 5, 45 and they reply in words similar to Jo. 9, 29. In spite of the omission of the long theological discussion, Jo. 5, 17 ff., it can be safely assumed that Jo. 5, 39 ff. provides the clue to the setting, in the dispute with the Jews about healing on the Sabbath, which begins Jo. 5, 1. The opening lines, which are hopelessly corrupt, the editors have taken as a charge by Jesus to the lawyers to punish wrong-doers but not him. Whether or not this be correct, the original brief statement must be taken as the Unknown Gospel's equivalent for Jo. 5, 9 ff.

An interesting feature of this narrative is that the text of the Unknown Gospel agrees with a well-known doublet to Jo. 5, 39, attested by some 'Western' authorities. It seems improbable, as the editors suggest, that this slightly variant text should have been hunted out in the Unknown Gospel, noted in the margin of a manuscript of John and later assimilated, but it is quite conceivable that the Unknown Gospel knew the text of John in this form. In the Johannine context the usual reading is preferable; in the Unknown Gospel the matter is complicated by the view of the editors that *ἐπαινᾶτε* is an imperative.

The second incident is one in which the multitude resolves to stone Jesus and the 'rulers' try to arrest him and hand him over to the crowd. They were unable to do this because his hour of betrayal had not yet come and the Lord passed through the midst of them and went away. The parallels suggested are the attempts at stoning and arresting Jesus in Jo. 8, 59; 10, 31; 7, 30; 7, 44; and 10, 39; but Jesus' disappearance through the midst of the crowd is the equivalent of Lk. 4, 30.

In this passage it would seem impossible to deny either the secondary character of the narrative of the Unknown Gospel or its dependence on both John and Luke and comparison shows the text of the Unknown Gospel to be derivative and inferior:



Jo. 7, 30: ὅτι οὐπω ἐληλύθει ἡ ὥρα αὐτοῦ

Unknown Gospel: ὅτι οὐπω ἐληλύθει αὐτοῦ ἡ ὥρα τῆς παραδόσεως  
Ἡ ὥρα τῆς παραδόσεως is obviously an expansion of ἡ ὥρα αὐτοῦ.

Lk. 4, 30: αὐτὸς δὲ διελθὼν διὰ μέσου αὐτῶν ἐπορεύετο

Unknown Gospel: αὐτὸς δὲ ὁ κύριος ἐξελθὼν διὰ μέσου αὐτῶν  
ἀπένευσεν ἀπ' αὐτῶν.

This passage is found in Luke alone and has no significant variants. The addition in the Unknown Gospel of ὁ κύριος, and the awkward ἀπένευσεν ἀπ' αὐτῶν for ἐπορεύετο are clear evidence of its secondary character.

The next incident is a variant account of the story of the healing of the leper: Mt. 8, 2-4; Mk. 1, 40-44; Lk. 5, 12-14. Here there is no parallel in John but the introductory sentence shows an unmistakable dependence on Matthew:

Mt. 8, 2: καὶ ἰδὼν λεπρὸς προσελθὼν προσεκύνει αὐτῷ λέγων

Unknown Gospel: καὶ ἰδὼν λεπρὸς προσελθὼν αὐτῷ λέγει.

Mark, on whom Matthew depends, reads, καὶ ἔρχεται πρὸς αὐτὸν λεπρὸς, παρακαλῶν αὐτὸν καὶ γονυπετῶν λέγων αὐτῷ κ.τ.λ. and Luke paraphrases independently. The text of the Unknown Gospel continues to paraphrase Matthew (with no agreements with the peculiarities of Mk. and Lk.) but adds touches of its own in substituting the curious title διδάσκαλε Ἰησοῦ for the Synoptic κύριε (Streeter, *The Four Gospels*, p. 309) and in the leper's explanation that he had contracted his disease by associating with lepers at an inn, λεπροῖς συνοδεύων καὶ συνεσθίων αὐτοῖς ἐν τῷ πανδοχείῳ ἐλέγησα καὶ αὐτὸς ἐγώ, an embellishment remarkable for its contradiction of all that is known of the treatment of lepers in antiquity. The result of the cure is expressed in words most closely parallel to Mark:

Mk. 1, 42: καὶ εὐθὺς ἀπῆλθεν ἀπ' αὐτοῦ ἡ λέπρα

Unknown Gospel: καὶ εὐθέως ἀπέστη ἀπ' αὐτοῦ ἡ λέπρα

Luke following Mark changes the order to ἡ λέπρα ἀπῆλθεν ἀπ' αὐτοῦ. Matthew emends radically.

The next incident is a peculiar account of the dispute over what is due to Caesar and displays a bewildering confusion of elements found in John and the Synoptics. The question addressed to Jesus is introduced by a sentence found in John in the dispute with Nicodemus over baptism:

Jo. 3, 2: ῥαββί, οἶδαμεν ὅτι ἀπὸ θεοῦ ἐλήλυθας διδάσκαλος

Unknown Gospel: διδάσκαλε Ἰησοῦ, οἶδαμεν ὅτι ἀπὸ θεοῦ ἐλήλυθας

There can be no doubt that the text of the Unknown Gospel is secondary and that the characteristic διδάσκαλε Ἰησοῦ is sub-

stituted here for  $\beta\alpha\beta\beta\iota$ , just as in the previous section it was substituted for  $\kappa\acute{\upsilon}\rho\iota\epsilon$ .  $\Delta\iota\delta\acute{\alpha}\sigma\kappa\alpha\lambda\omicron\varsigma$  in John is dropped from the Unknown Gospel because of its appearance in the address. The curious phrase which follows,  $\alpha\gamma\alpha\rho\ \pi\omicron\iota\epsilon\iota\varsigma\ \mu\alpha\rho\tau\upsilon\rho\epsilon\iota\ \upsilon\pi\epsilon\rho\ \tau\omicron\upsilon\varsigma\ \pi\rho\omicron\phi\eta\tau\alpha\varsigma\ \pi\acute{\alpha}\nu\tau\alpha\varsigma$  is an awkward substitute for Jo. 3, 2b. The question is then posed without introducing the coin or its superscription, "Tell us, therefore, is it lawful (? to render) unto kings that which pertaineth unto their rule?" But Jesus knowing their thought was moved and said to them, "Why do you call me a teacher with your mouth, when you do not listen to what I say? Isaiah prophesied well concerning you, saying, 'This people honour me with their lips, but their heart is far from me. In vain do they worship me, precepts . . .'" Here there is a break in the text.

It should be noticed that in the Unknown Gospel the general question of civil obedience is substituted for the more specific and timely question of taxation. Jesus' reply at the beginning suggests Lk. 6, 46 with the addition of  $\tau\omicron\ \sigma\tau\omicron\mu\alpha\tau\iota\ \upsilon\mu\omicron\upsilon\varsigma$  (assimilated from Is. 29, 13) and the substitution of  $\delta\iota\delta\acute{\alpha}\sigma\kappa\alpha\lambda\omicron\varsigma$  for  $\kappa\acute{\upsilon}\rho\iota\omicron\varsigma$ , as in the previous sections. It concludes with Mt. 15, 7-8 (cf. Mk. 7, 6-7) in which the quotation of Is. 29, 13 is corrected to agree with LXX.

The final incident has no parallel in the New Testament. The text is too corrupt to be successfully restored. The disciples are perplexed at a question of Jesus', Jesus walks by the Jordan, stretches out his hand, sprinkles water (?) on the ground (?) and it (?) bore fruit.

It seems improbable that many will agree that the Unknown Gospel antedates the canonical gospels or contributed in any way to their formation. In spite of the good impression made upon the editors by the author's style and literary manner, a comparison of the parallel texts in the New Testament clearly shows the secondary and editorial character of the papyrus fragment. The pieces of its mosaic text are drawn strangely at random from the canonical gospels but the reverse assumption that the *disjecta membra* of the Unknown Gospel are to be found strewn widely over the canonical four suggests an even more baffling literary procedure. The truth about the Unknown Gospel appears to be: (a) that the author knew all four canonical gospels, (b) that much of his narrative is a strangely devised and apparently unmotivated harmony of them, (c) that he embellished some of the accounts he knew from his sources, and (d) that he invented incidents of his own. The result is a work which in literary method and effect stands between the Diatessaron of Tatian and the Gospel of Peter. In the freedom with which it treats its sources it is not unlike the Fourth Gospel itself. It cannot be used as evidence for the pre-canonical stage of gospel tradition but its intimate acquaintance with the four

admitted to the canon is an additional proof of the firm place these already held in the first half of the second century.

R. P. CASEY.

BROWN UNIVERSITY.

OSCAR WILLIAM REINMUTH. *The Prefect of Egypt from Augustus to Diocletian.* Klio, Beiheft XXXIV, Neue Folge, Heft 21. Leipzig, 1935. Pp. xiv + 155.

In this study Professor Reinmuth has sought to bring together all the available material bearing on the office of the Prefect of Egypt, who occupied such a unique position among the provincial governors of the Principate. The task has been carried out in a thorough and scholarly fashion, and its results will be welcomed alike by historians and papyrologists. In thirteen chapters the author analyses the relation of the prefect to the emperor and to the other officials in Egypt, the composition of his office, and his administrative, judicial, and military functions, dealing in great detail with each aspect of his activities. One might suggest that the term "civil" is preferable to "civic" in describing the office personnel of the prefect (p. 12), particularly since it is contrasted with the "military staff." Of particular interest are: the author's argument (pp. 47-50) that the edict of Tiberius Julius Alexander of 69 A. D. is an example of a provincial edict, his view that the edict of C. Vibius Maximus of 104 A. D. did not authorize the taking of a census but was a supplementary proclamation reinforcing the command of the census edict that all persons return to their respective *idíā* (pp. 67-68), and his rejection of a general property registration in 129 A. D. (p. 77), in which he is supported by A. M. Harmon, *Egyptian Property Returns*, Yale Classical Studies, IV, pp. 135-236, who, however, differs from Reinmuth on other points. The footnotes are very comprehensive and show a mastery of the special literature of the field. On the relation of the offices of *idiologos* and *archiereus* reference should be made to the discussion by H. Stuart Jones, *Fresh Light on Roman Bureaucracy*, Oxford, 1920, pp. 23-34. One wonders whether the economic decline of Egypt prior to Severus Alexander was the primary reason for the prefect's loss of prestige and power. May not the reduction in the strength of the Roman garrison (p. 119) have been an important factor here? A list of the known prefects of Egypt and another of their edicts are given in appendices, and there are indices of English and Latin terms, Greek words, names of persons, and citations from papyri.

UNIVERSITY OF MICHIGAN.

A. E. R. BOAK.

Manichäische Handschriften der Sammlung A. Chester Beatty.  
 Bd. I: Manichäische Homilien herausgegeben von HANS  
 JAKOB POLOTSKY mit einem Beitrag von Hugo Ibscher.  
 Verlag von W. Kohlhammer, Stuttgart, 1934. Pp. xxi +  
 96 of text and translation; pp. 22 of index. Rm. 27  
 unbound, 30 bound.

This handsome volume, which has been made possible by the wise munificence of Sir Herbert Thompson, is the first instalment of the new Manichee Bible. We received the first detailed account of the new discoveries in the admirable article of Schmidt,<sup>1</sup> Polotsky, and Ibscher in the *Sitzungsberichte der Berliner Akademie* for 1933. The present work publishes the contents of a mass of fragments which looked hopeless even to Ibscher; but his patience and uncanny skill have been amply rewarded.

These homilies are contained in a codex of approximately 400 A. D. They are the work of pupils of Mani; the first, which is the latter part of the Sermon on Prayer, is by Salmaios; the second, the Sermon of the Great War, is by one Koustaïos; both were known from other documents. This second sermon is of extraordinary interest as containing an apocalyptic description of the Last Things, based on material in the Synoptic Gospels, but possibly drawing on them at second hand through a writing of Mani's. There is a pregnant page describing how Zarathustra turned out false religion from Babylon, as did Jesus from Jerusalem, and how now the third Apostle (Mani) has come and turned out the Magian religion; this was to be the last stage. I will not linger on further details of this text except to mention that on page 27 metempsychosis is expressly mentioned (in a later homily, page 91, a lion is said to have been recognized as an incarnation of Pontius Pilate) and that page 30 implies that even the Electi are not yet perfect. The third homily gives an account of the persecution in which Mani and Sisinnius were crucified. The fourth homily, among other matters, has a glorification of the Pantheon and an account of Mani's entrance into the realm of light.

It is noteworthy that we find two Latin military loanwords, but I am not competent to appreciate the linguistic significance of these texts. Their content is extraordinary. We have known Manichaeism hitherto from the refutations written by its adversaries and from the Turfan texts which give forms which it took in Central Asia. Now we are transported into the actual story of its beginning as seen in what may be called its aposto-

<sup>1</sup> For other literature cf. the bibliography of Graeco-Roman Egypt in the *Journal of Egyptian Archaeology*, 1934-5.

lic age. We can only offer our warmest thanks and congratulations to the editors for their great achievement and eagerly await the rest of their work.

ARTHUR DARBY NOCK.

HARVARD UNIVERSITY.

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Cicero, the Verrine Orations, with an English Translation by L. G. H. GREENWOOD. Volume II. Against Verres: Part Two, Books III, IV, and V. Loeb Classical Library. Harvard University Press and William Heinemann, Ltd., 1935. Pp. 694. \$2.50.

This volume completes Mr. Greenwood's translation of the Verrines. The preface and introduction to the whole work are found in Volume I, which appeared in 1928. The text, largely based on Peterson's Oxford edition, is in general a sound one, and the idiomatic and spirited translation maintains the high standard of the earlier volume. I have found only one passage where there is any serious inaccuracy in the rendering: on p. 21 (II, III, 7, 18) the translator seems inadvertently to have taken the first words of § 18, *L. Octavio et C. Cottae consulibus*, as a date in the ablative, and this slip has led him into a mistranslation of a large part of the paragraph.

In his treatment of the work of his predecessors Mr. Greenwood has done some rather strange things. He has given no list of previous editions, but merely mentions in his preface (Vol I, p. v) that he has used for his text those of Nobbe, Müller, and Peterson. He appears to have been unaware during his work on Volume I that Müller's edition was succeeded in 1922-3 by a new Teubner text edited by A. Klotz. Though Klotz himself called attention to this omission in his review of the first volume (*Philol. Woch.*, XLIX (1929), pp. 1427-8), the unawareness has continued in Volume II. The use of Klotz's edition might have resulted in an improvement in the critical notes in some cases. Mr. Greenwood knows the Budé edition of the Verrines edited by H. de la Ville de Mirmont and J. Martha (1922-5), as is shown by his mention of a reading of Martha's (p. 78, note 2), but he does not otherwise reveal the existence of this edition to his readers. The only commentary mentioned in the preface (Vol. I, p. vi) is that of Long, but we find a note (p. 302, note a) credited to "Hall," without any further clue being given to the existence of Hall's edition of the Fourth Verrine. This note, by the way, would not be comprehensible to readers who are ignorant of Greek.

The volume is in general a very creditable addition to the series.

CLINTON W. KEYES.

COLUMBIA UNIVERSITY.



## BOOKS RECEIVED.

(It is impossible to review all books submitted to the JOURNAL, but every item of interest is listed under Books RECEIVED. Contributions sent for review or notice are not returnable.)

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